

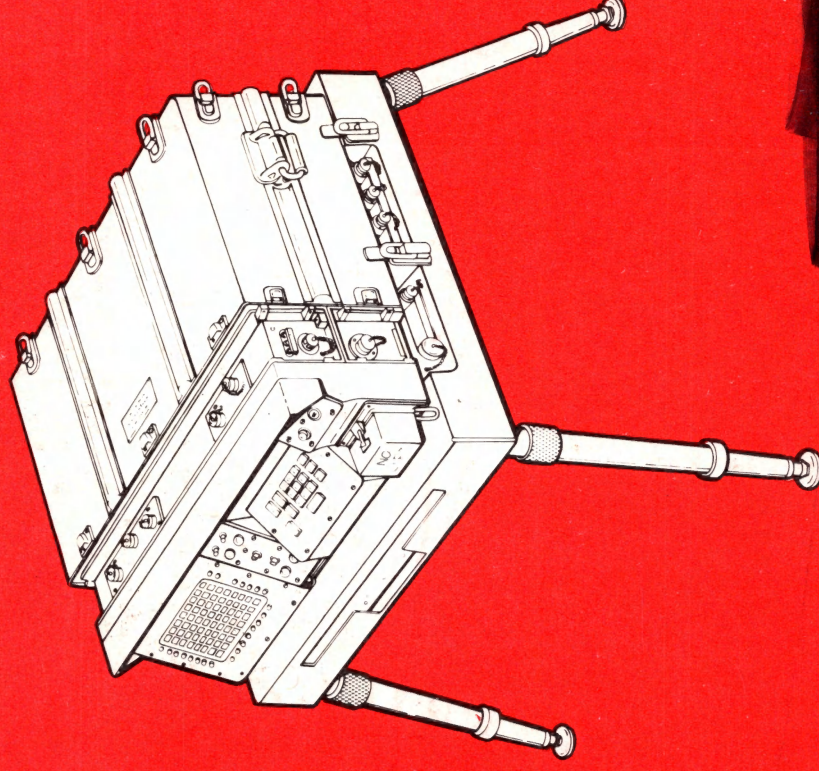
TM 9-1220-221-34/5

TECHNICAL MANUAL

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL

RESERVE COPY

PROGRAM
PRINTOUT OF
TEST TAPE E
(4931-00-687-8514)
FOR
COMPUTER,
GUN DIRECTION,
M18
(FADAC)



(1220-00-448-0131)

HEADQUARTERS, DEPARTMENT OF THE ARMY

MAY 1981



WARNING



HIGH VOLTAGE

is used in the operation of this equipment.

DEATH ON CONTACT

may result if personnel fail to observe safety precautions.

Never work on electronic equipment unless there is another person nearby who is familiar with the operation and hazards of the equipment and who is competent in administering first aid. When the technician is aided by operators, he must warn them about dangerous areas.

Whenever possible, the power supply to the equipment must be shut off before beginning work on the equipment. Take particular care to ground every capacitor likely to hold a dangerous potential. When working inside the equipment after the power has been turned off, always ground every part before touching it.

Be careful not to contact high-voltage connections of 220-volt ac input connections when installing or operating this equipment.

Whenever the nature of the operation permits, keep one hand away from the equipment to reduce the hazard of current flowing through vital organs of the body.

Do not be misled by the term "low voltage". Potentials as low as 50 volts may cause death.

For artificial respiration, refer to FM 21-11.

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL

TEST TAPE E PROGRAM PRINTOUT

FOR

COMPUTER, GUN DIRECTION, M18

(FADAC)

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, US Army Armament Materiel Readiness Command, ATTN: DRSAR-MAS, Rock Island, IL 61299. A reply will be furnished to you.

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*This manual supersedes TM 9-1220-221-34/5, 6 March 1964, including all changes.



CHAPTER 1

INTRODUCTION

1-1. SCOPE

These instructions provide information and guidance for personnel responsible for direct support and general support maintenance of the gun direction computer M18 (FADAC). These instructions provide the current complete test tape E program printout. This printout corresponds to the information in the associated punched tape used in semiautomatic and manual isolation of malfunctions in the FADAC.

1-2. REFERENCES

- a. For a general description of the FADAC and its operation and maintenance, refer to TM 9-1220-221-10-1, TM 9-1220-221-10-2, TM 9-1220-221-20&P, and TM 9-1220-221-34/1.
- b. TM 9-1220-221-34/1 contains a list of references, including supply manuals, technical manuals, and other available publications applicable to the FADAC, its support equipment, and associated kits and equipment.

1-3. TAPE CARTRIDGE ASSEMBLY

- a. Description and Identification. Punched paper tape is supplied in a tape cartridge 8 inches high, 9 inches wide, and 1-1/2 inches deep. The cartridge is equipped with an adjustable filler to accommodate tapes of various lengths. A number on the cartridge identifies the assembly. The tape is identified by a number printed at the start and finish of the tape.
- b. Nature of Tests. When run in association with the signal data reproducer AN/GSQ-64 (SDR) and the computer logic unit test set AN/GSM-70 (FALT), the tapes provide a test of circuits within the FADAC. The circuits tested are noted in the tape program printout listed in chapter 3.
- c. Assemblies Tested. If the tape stops when running a test and an error indicator flashes on the FALT, the printout should be consulted. The printout indicates the possible malfunctioning assembly or assemblies according to the test number (marker number) being performed when the error occurred.

CHAPTER 2

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE

USING TAPE-PROGRAMMED TEST TAPE E

2-1. SUPPORT EQUIPMENT

a. **Controls and Indicators.** A complete description of the controls and indicators of the SDR and the FALT, including control box C-4020/GSM-70, is found in the operation and organizational maintenance manuals for these units.

b. General Operation.

(1) A semiautomatic tape-programmed test for the purpose of malfunction isolation may be performed. Load the tape cartridge assembly containing the test tape in the SDR. Connect the equipment in accordance with the instructions on the decal on top of the light shield of the FALT.

(2) Follow instructions given in TM 9-1220-221-20 & P, or as specified in chapter 3. The equipment may then be energized and the tape run by moving the OPERATE control on the FALT to RESET, then to TAPE. In direct support and general support maintenance shops, this will normally be done with the control box C-4020 mounted on the half-hinge on the right side of the FALT and connected using the cable provided in the control box case.

(3) When the test detects an improper result (malfunction), the tape automatically stops, an ERROR lamp on the FALT flashes, and a marker number and index number are displayed. The corresponding marker number is then determined from the printout. The test in process is determined by counting the number of columns on the printout which have occurred since the last marker number, up to the index number displayed.

played. The step in the test process which resulted in an error is then known. The test may be repeated by moving the OPERATE control to MAN (manual) and entering the commands, using the control box.

CAUTION

No attempt should be made by field maintenance personnel to replace defective components on the circuit boards. Not only can replacement of components have a detrimental effect on the operation of the circuit involved, but indiscriminate use of a soldering iron can cause further damage to the circuits as well as surrounding components. Defective boards should be forwarded through normal supply channels to depot shops for repair.

(4) Alternate tests may be commanded by manual operation of the control box. The etched circuit board in the board (slot) number indicated by the printout may then be removed and replaced by a spare. The test may then be rerun.

(5) If the program continues beyond the former point of error, it may be assumed that the replacement board has cleared the trouble.

(6) For a detailed discussion of the operation and analysis in a typical situation, see TM 9-1220-221-34/1.

c. **Control Box C-4020/GSM-70.** The test tape may be run while the control box is attached to the FALT. The operator may insert commands and generate measurements by means of manual operation of the control box. For detailed procedures, refer to TM 9-4931-204-34/1.

2-2. ORGANIZATION OF THE PROGRAM PRINTOUT

a. **Glossary of Special Terms and Abbreviations.** Special terms and abbreviations, together with an explanation of their meaning, are listed in chapter 3.

b. Reading the Program Printout.

(1) **General instructions.** The printout is organized in 10 columns. The instructions are self-explanatory. The number on a line by itself indicates the marker number. To determine test progress, the MARKER-INDEX number is read from the FALT display. The marker

number is then found in the printout (see chapter 3). All columns are read from left to right up to the index number displayed. That term in the column so determined is the command, action, or measurement in progress when the tape is stopped. Characters or other information not aligned vertically with the 10 columns are not counted in making a determination.

(2) **Example.** The ERROR indicator of the FALT flashes and the MARKER-BOARD #1 reads 345 and the INDEX-BOARD #2 reads 110. Turn to page 3-122 where marker 345 is. Find marker 345. Find the eleventh row of terms. Follow it over to the tenth term where you will find the term 1SF, which is the command in progress when the tape stopped.

CHAPTER 3

TEST TAPE E PROGRAM PRINTOUT

Section I. INTRODUCTION

3-1. GENERAL

Section III represents the printout of tape-programmed test B. Identification information with possible revision letters or dates is given in the opening lines of the listing, together with connection information and instructions. Check identification information in the printout against identification information on the tape. The printout must correspond to identification information on the start and finish ends of the tape.

3-2. SPECIAL TERMS AND ABBREVIATIONS

- a. The words "tape reader" refer to the SDR.
- b. The words "Manual Entry Unit" refer to the control box C-4020/GSM-70.
- c. Numbers separated by a hyphen (e.g., 015-034) refer to a marker and index number combination.
- d. Symbols followed by a hyphen (e.g., B1-) refer to the complement or inversion of the logic symbol; sometimes referred to in printed text as the prime, or followed by a prime (').

- e. The words "shorting cable" refer to the branched wiring harness. This harness has three plugs marked P10, P16, and P17 which fit corresponding receptacles on the FADAC. The harness is stored in the rear cover and is part of the FALT.
- f. The words "mechanical tape reader" refer to the punched tape reader located on the lower right corner of the main control panel of the FADAC. The tape sensing lever of this reader rides high when tape is present. When tape is not present, the tape sensing lever roller wheel falls into a slot. In this manner, electrical circuits within the reader sense the presence or absence of tape. It is possible to place a short piece of tape underneath the tape sensing lever in such a way that it is not engaged by the sprocket teeth and will not move when the sprocket teeth turn. In this way, the electrical equivalent of the continuous presence of tape for an indefinite period may be simulated. If, however, the short piece of tape used is of improper width or too thick so that tape sensing lever rides abnormally high, the equivalent of excessive tape tension is simulated, which activates certain inhibit circuits.

Section II. OPERATOR INSTRUCTIONS

3-3. INITIAL FALT SETUPS FOR FADAC TESTING

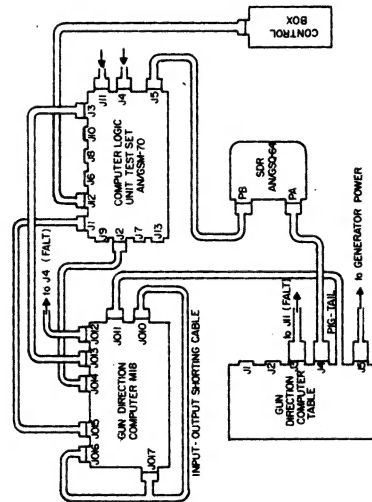
- a. CONFIDENCE TEST switch in OFF position.
- b. TEST NORMAL indicator lamp is lit.
- c. DELAY START switch is OFF position.
- d. PROGRAM SKIP A, B, and C switches in OFF position.
- e. WR SW switch in OFF position.
- f. HOMING SELECT switch in MARKER INDEX position.
- g. HOMING switch in OFF position.
- h. MARGINAL TEST switch in OFF position.
- i. PRESET STOP switch in NORM position.

- (1) FALT J4 to FADAC J12.
 - (2) FALT J3 to FADAC J13.
 - (3) FALT J2 to FADAC J14.
 - (4) FALT J1 to FADAC J15.
- c. Depress matrix buttons A and 1.
 - d. Depress weapon type button 1.
 - e. Depress battery button A.

- f. The input-output shorting cable shall be connected between J10, J16, and J17 of FADAC.

3-4. INITIAL FADAC SETUPS FOR FALT TESTING

- a. The memory cable plugs P2 thru P8 are connected to the memory.
- b. The FALT cables shall be connected to FADAC as follows:



- g. Energize the SDR, FALT, and FADAC in that order.
- h. Check both internal and external voltages using the VOLTAGE MONITOR. Ensure that MARGINAL TEST switch on FADAC is in OFF position when checking external voltage with VOLTAGE MONITOR.
- i. Start the tape reader.

006	OSA AK C2 TTF 1SA C5 A0	CR5 MN B6 AP AP 02 LO	K T0 B4 03 06 C7 B3	E C5 C3 03 D1 OE18	05 02 IX AX NX 1SA	04 CL7 B2 C4 CL7 1E18	D DC B1 TP CR4 1TF	TX AX OE18 MN CR3 AP	AC TSO 1SA AK CR6 03	TP CR2 1E18 C3 TSO .
	OSA C5 B4 04 1SA TX CR6 04	MN 02 C3 AP C3 TSO .	K CL7 IX AK C5 A0	E DC B2 06 02 LO	05 AX B1 04 C7 B3	03 TSO OE18 TP D1 OE18	AC CR5 1SA AX NX 1SA	TX CR2 1E18 C4 CL7 1E18	D C2 1TF CR5 CR4 1TF	T0 B6 AP D CR3 AP .
007	OSA C5 B4 05 1SA TX CR6 05	AK 02 C3 AP C3 TSO .	K CL7 IX MN C5 A0	E DC B2 06 02 LO	05 AX B1 04 C7 B3	03 TSO OE18 TP D1 OE18	AC CR5 1SA AX NX 1SA	TX CR2 1E18 C4 CL7 1E18	D C2 1TF CR5 CR4 1TF	T0 B6 AP D CR3 AP .
	OSA D B6 06 1SA MN A0	C3 AK B4 AP AP LO	C5 MN IX 06 C7 B3	K CL7 B2 TX D1 OE18	E DC B1 TP NX 1SA	05 AX OE18 T0 CL7 1E18	04 TSO 1SA AX CR4 1TF	03 CR5 1E18 C4 CR3 AP	02 CR2 1TF CR5 CR6 06	AC C2 AP D TSO .

Tape Marker
stops number

008	OSA AK B4 07 ISA D TSO	C7 MN C3 AP MN A0	K CL7 IX C5 AK LO	E DC B2 06 C3 B3	05 AX B1 TX D1 OE18	04 TSO OE18 TP NX ISA	03 CR5 ISA T0 CL7 1E18	02 CR2 1E18 AX CR4 1TF	AC C2 1TF C4 CR3 AP	D B6 AP CR5 CR6 07
	OSA D B6 AP ISA C3 A0	MN AK B4 08 AP C5 LO	AX T0 C3 06 C7 B3	K C5 IX 02 D1 OE18	E CL7 B2 TP NX ISA	05 DC B1 C4 CL7 1E18	04 TSO OE18 03 CR5 CR4 1TF	03 CR5 1SA D CR3 AP	AC C2 1E18 TX CR6 08	TX C2 1TF AK TSO
009	OSA MN B4 09 ISA CR5 NX ISA OSA MN B6 AP OSA 04 CR4 1TF	D1 C5 C3 AP 04 06 1E18 NX T0 B4 10 AP TX CR3 AP	AK 02 IX K D CR4 1TF AK C5 C3 K MN 10	AC DC B2 CL7 TX CR3 AP CL7 02 IX D 03 TSO	TP AX B1 T0 MN CR6 09 AC DC B2 AX C3 A0	TX TSO OE18 AX 03 TSO TP AX B1 C4 C5 LO	06 CR5 ISA C4 C3 A0 TX TSO OE18 E 02 B3	03 CR2 1E18 E C5 LO 06 CR5 1SA 05 C7 OE18	D C2 1TF 05 02 B3 03 CR2 1E18 TP D1 ISA	04 B6 AP TP C7 OE18 04 C2 1TF CR5 06 1E18

Tape stops Marker number

012	ISA AK LO OSA 02 AX ISA ISA AK LO OSA 03 DC B1 ISA C5 OE18	AP C5 B3 CR4 AC TSO 1E18 AP C3 B3 CR6 02 AX OE18 AP C7 ISA	TSO C7 OE18 CR3 TP C2 1TF CR5 C5 OE18 CR5 AC TSO ISA AX D1 1E18	C4 D1 ISA TX D B6 AP CR2 C7 ISA CR3 TP CR2 1E18 C4 NX 1TF	TP NX 1E18 K AK B4 16 AX D1 1E18 TX D C2 1TF TP CL7 AP	CR5 CL7 1TF E MN C3 C4 NX 1TF K AK B6 AP D CR4 17	D CR4 AP 06 TO IX TP CL7 AP E MN B4 17 AC TSO	TX CR3 15 05 C5 B2 D CR6 16 06 TO C3 MN AO .	AC CR6 04 CL7 B1 AC TSO 05 C5 IX AK LO .	MN AO 03 DC OE18 MN AO 04 CL7 B2 C3 B3 .
013	OSA 02 CR2 1E18 ISA C3 LO OSA D IX	C4 TP C2 1TF AP C5 B3 AO AK B2	AC D B6 AP TX C7 OE18 K MN B1	TSO AK B4 18 TO D1 ISA E TO OE18	K MN C3 AX NX 1E18 06 CL7 ISA	E C5 IX TP CL7 1TF 05 DC 1E18	06 CL7 B2 CR5 CR4 AP 04 AX 1TF	05 DC B1 D CR3 18 03 TSO AP	04 AX OE18 MN CR6 02 CR5 19	03 CR5 ISA AK AO AC CR2 .
014	OSA AC CR2 ISA CR5 CR3 20 OSA AC CR5	L0 D IX AP D CR6 AX TP CR2	C5 AK B2 C2 AC TSO B3 TX C2	K MN B1 B6 MN AO K AK C3	E TO OE18 B4 AK B3 E MN OE18	06 CL7 ISA TP C7 OE18 06 TO ISA	05 DC 1E18 TX D1 ISA 05 C5 1E18	04 AX 1TF C3 NX 1E18 04 CL7 1TF	03 TSO AP AX CL7 1TF .	02 CR5 20 C4 CR4 AP 02 TSO 21

Tape stops	Marker number
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
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15	15
16	16
17	17
18	18
19	19
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98	98
99	99
100	100

[illegible]

023

[illegible]

TOX- 1SA MN OE18 OX	AP C7 1SA	C5 D1 1E18 TOX- 14	06 NX OTF	TX CR4 AP	TP CR3	T0 CR6 06 C5	AX AO	C4 LO 05 AKA	CR5 B3	07
1SA C4 LO AKA	AP CR5 B3	05 D1 1E18 MN OE18	E C7 1SA	05 D1 1E18	04 NX OTF	03 CR4 AP	02 CR3	T0 CR6 06 OX	AX AO	05
026 1SA MN OE18	AP C7 1SA TOX- 14	K D1 1E18	06 NX OTF	TX CR4 AP	TP CR3	T0 CR6 06 OX	AX AO K	C4 LO	CR5 B3 05 AKA	
1SA MN OE18	AP C7 1SA TOX- 14	E D1 1E18	06 NX OTF	TX CR4 AP	TP CR3	T0 CR6 06 OX	AX AO E	C4 LO	CR5 B3 05 AKA	
1SA D1 1E18	AP C7 1SA TOX- 18	TX CR4 AP TX- 05 D1 1E18	TP CR3	T0 CR6 06 OX	AX AO 06-	C4 LO	CR5 B3 05 AKA	MN OE18	C7 1SA TOX- 14	
1SA MN OE18	AP C7 1SA TOX- 14	TX CR4 AP TX- 05 D1 1E18	06 NX OTF	TX CR4 AP	TP CR3	T0 CR6 06 OX	AX AO 05	C4 LO	CR5 B3 05 AKA	
027 1SA MN OE18	AP C7 1SA TOX- 14	03 D1 1E18	06 NX OTF	TX CR4 AP	TP CR3	T0 CR6 06 OX	AX AO 03	C4 LO	CR5 B3 05 AKA	
1SA MN OE18	AP C7 1SA TOX- 14	02 D1 1E18	06 NX OTF	TX CR4 AP	TP CR3	T0 CR6 06 OX	AX AO 02	C4 LO	CR5 B3 05 AKA	
1SA D1 1E18	AP C7 1SA TOX- 08	06 D1 1E18 CR4 AP 06 CR4 AP	TP CR3	T0 CR6 06 OX	AX AO TX- 05	C4 LO	CR5 B3 05 AKA	MN OE18	C7 1SA TOX- 14	
1SA D1 1E18	AP C7 1SA TOX- 08	06 D1 1E18 CR4 AP 06 CR4 AP	TP CR3	T0 CR6 06 OX	AX AO TX- 05	C4 LO	CR5 B3 05 AKA	MN OE18	C7 1SA TOX- 14	

[illegible]

031	OTF 1SA C7 1SA	AP AP D1 1E18	05 NX OTF	08 OLP	K06- 02 CR3	06- TP CR6 OLP	C4 A0 05A	CR5 L0	C3 B3	C5 OE18
	1SA C7 1SA C7 1SA MNA-	AP D1 1E18 AP D1 1E18	05 NX OTF 04 NX OTF	06 CR4 AP 06 CR4 AP	02 CR3 02 CR3	TP CR6 OLP TP CR6 OLP	C4 A0 05A C4 A0 04B	CR5 L0 05 CR5 L0	C3 B3 C3 B3 MNA	C5 OE18 C5 OE18 C5 OE18
	1SA C7 1SA C7 1SA KD3	AP D1 1E18 AP D1 1E18	04 NX OTF 03 NX OTF 03 NX OTF	06 CR4 AP 06 CR4 AP 06 CR4 AP	02 CR3 02 CR3 02 CR3	TP CR6 OLP TP CR6 OLP TP CR6 OLP	C4 A0 04B C4 A0 03A C4 A0 03A	CR5 L0 04 CR5 L0 CR5 L0 03	C3 B3 C3 B3 OD0 C3 B3	C5 OE18 C5 OE18 KD3 C5 OE18 03 OD0
032	1SA NX OTF 1SA NX OTF 1SA NX OTF 1SA C7 1SA	AP CR4 AP AP CR4 AP AP CR4 AP D1 1E18	06 CR3 06 CR3 06 CR3 AC NX OTF D1 MN L0 AKA	TP CR6 OLP 08 CR6 OLP 08 CR6 OLP 08 CR6 OLP	C4 A0 02- C4 A0 TPA- C4 A0 TPA- 02 CR3 CL7 C5 OE18	CR5 L0 CR5 L0 CR5 L0 TP- TP CR6 AC	C3 B3 C3 B3 C3 B3 C4 A0 AX C7 1E18	C5 OE18 C5 OE18 C5 OE18 CR5 L0 TXA- C4 NX OTF	C7 1SA C7 1SA C7 1SA C3 B3 E CR4 AP	D1 1E18 D1 1E18 D1 1E18 C5 OE18 C5 OE18 05 CR3 09

033

TSA	AP	AK	CL7	T0	AX	C4	E	O5	CR5
04	MN	C3	C5	02	C7	NX	CR4	CR3	CR6
A0	L0	B3	OE18	1SA	1E18	OTF	AP	.	KAK1
TSA	AP	CL7	T0	AX	C4	E	O5	.	09
MN	C3	C5	02	C7	NX	CR4	CR3	CR6	A0
L0	B3	OE18	1SA	1E18	OTF	AP	.	09	KC-
.	O5	AKA	.	.	.	.	.	.	.
TSA	AP	CL7	T0	AX	C4	E	O5	CR5	04
MN	C3	C5	02	C7	NX	CR4	CR3	CR6	A0
L0	B3	OE18	1SA	1E18	OTF	AP	.	09	KC-
K-	.	AKA	.	.	.	.	.	.	.
TSA	AP	K	T0	AX	C4	E	O5	CR5	04
MN	C3	C5	02	C7	NX	CR4	CR3	CR6	A0
L0	B3	OE18	1SA	1E18	OTF	AP	.	09	A0
AKA	.	.	.	.	.	.	.	CL7-	.
								09	05
TSA	AP	K	CL7	AX	C4	E	O5	CR5	04
MN	C3	C5	02	C7	NX	CR4	CR3	CR6	A0
LC	B3	OE18	1SA	1E18	OTF	AP	.	09	.
AKA	.	.	.	.	.	.	.	.	.
TSA	AP	AC	K	CL7	T0	AX	C4	E	05
04	04	MN	C3	C5	02	C7	NX	CR4	CR3
CR5	A0	LO	B3	OE18	1SA	1E18	OTF	AP	.
CR6	.	.	.	.	.	.	.	.	.
AC	AP	NX	K	D	AX	C4	E	O5	CR5
TSA	MN	C3	C5	02	C7	D1	CR4	CR3	CR6
04	LO	B3	OE18	1SA	1E18	OTF	AP	.	10
A0	AKA	.	AX	C4	E	O5	CR5	CR6	.
.	AP	AK	02	D1	CR4	CR3	CR6	A0	.
TSA	C5	02	C7	OTF	AP	.	10	KI0C	.
C3	OE18	1SA	1E18	.	.	.	.	.	.
B3	.	.	.	.	.	.	.	.	.
	05								
TSA	AP	D	AX	C4	E	O5	CR5	CR6	MN
C3	C5	02	C7	D1	CR4	CR3	CR6	A0	L0
B3	OE18	1SA	1E18	OTF	AP	.	10	KI0C	K-
.	AKA	.	.	.	.	.	.	.	.
TSA	AP	K	AX	C4	E	O5	CR5	CR6	MN
C3	C5	02	C7	D1	CR4	CR3	CR6	A0	L0
B3	OE18	1SA	1E18	OTF	AP	.	10	KI0C	D-
.	AKA	.	.	.	.	.	.	.	.
TSA	AP	AK	K	D	AX	C4	E	O5	CR5
04	AP	C3	C5	02	C7	D1	CR4	CR3	CR6
A0	MN	B3	OE18	1SA	1E18	OTF	AP	.	10
AK	LO	.	.	.	.	.	.	.	KI0C
KI0	AK	.	.	.	.	.	.	.	.

034

035

039

AP 04 A0 AC AP C5 B3 08 0LP AP 05 CR3
AP 04 A0 AX-

[illegible]

T0 02 0E18
AC 06 D1 7E18
AK C3 L0
T0 02 0E18

06
C7
TSA
03
NX
OTF
TX
C5
B3
MAX1
06
C7
TSA
08
OLP

03
D1
TE18
.
C4
CR4
AP
.
T0
02
0E18
.
03
D1
TE18
.

DC	NX	OTF	05	CR3	06	C7	1SA	MAX0	DC	NX	OTF	MAX3
								14				11

C4
 CR4
 AP
 CR5
 CR6
 OA
 O3
 D1
 TE18
 C4
 CR4
 AP
 11

05
CR3 . . 04
AO DC- . DC
NX OTF . 05
CR3 . 13 MAX1

1SA
CR5
CR6
AK-
1SA
04
A0
1SA
CR5
CR6
MAX1
1SA
C4
CR4
AP

AP 04 A0
AP C3 L0 OF AP 04 A0 MN- AP 05 CR3

[illegible]

TX C5 B3 MN AK 02 0E18
TX C5 B3 0F MN 04 A0 AX
04

T0	02	0E18	.	06	C7	TSa	.	T0	02	0E18	.	AK	C3	L0	.
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06
C7
TSA
MAX0
03
D1
TE18

06
C7
TSA
OLP
TX
C5
B3
MAX2

14 08 12

03 03
D1 D1
1E18 1E18
DC NX
OTF OTF
TO TO
02 02
0E18 0E18

DC	NX	OTF	.	C4	CR4	AP	.	DC	NX	OTF	MAX3	06	C7	TSA	MAX0
											11				14

C4 CR4 AP . 05 CR3 . . C4 CR4 AP . 03 D1 TE18 .

05	CR3	.	.	CR5	CR6	TOX-	05	CR3	.	MAX2	DC	NX	OTF
						12				12			

7SA
CR5
CR6
AK-
7SA
04
A0
7SA
CR5
CR6
MAX0

AP 04 A0 AP C3 L0 AP 04 A0 MN-

05
MN C3 L0 AKA
MN C5 B3 AX C3 L0

TX C5 B3
AK 02 OE18
TX C5 B3
MAX3

TO
02
OE18
MAX3
06
C7
ISA
TO
02
OE18
MN

06
C7
1SA
MN
03
D1
1E18
06
C7
1SA

03
D1
1E18
.
DC
NX
OTF
03
D1
1E18
MAX2
12

14
DC NX OTF MAXO
C4 CR4 AP DC NX OTF

C4 CR4
AP 05 CR3
C4 CR4
AP

05
CR3 . .
CR5
CR6 TOX-
13 05
CR3 . .

043

048

Tape Marker
stops number

049	1SA C4 B3 1SA C4 B3	AP CR5 OE18 AP CR5 OE18	19. TO1C AP C7 1E18 AP MN LO	L0 MN 1SA C5 MN 1SA	C2 C7 1E18 C2 C7 1E18	B6 D1 OTF B6 D1 OTF	B4 NX AP B4 NX AP	TP CR4 TP CR4	TX CR3 L0 TX CR3 C5	C3 CR6 C3 CR6	AX A0 AKA AX A0 AKA	05 05
	1SA MN 1SA 1SA CR5 A0 AKA 1SA C3 OE18	AP C7 1E18 AP MN LO	19. TO1C AP C7 1E18 AP MN LO	L0 MN 1SA C5 MN 1SA	C2 C7 1E18 C2 C7 1E18	B6 D1 OTF B6 D1 OTF	B4 NX AP B4 NX AP	TP CR4 TP CR4	TX CR3 L0 TX CR3 C5	C3 CR6 C3 CR6	AX A0 AKA AX A0 AKA	05 05
050	1SA D1 OTF 1SA C5 1SA C3 OE18	AP NX AP AP C7 1E18 AP C5 1SA	19. TO1C AP C7 1E18 AP MN LO	L0 MN 1SA C5 MN 1SA	C2 C7 1E18 C2 C7 1E18	B6 D1 OTF B6 D1 OTF	B4 NX AP B4 NX AP	TP CR4 TP CR4	TX CR3 L0 TX CR3 C5	C3 CR6 C3 CR6	AX A0 AKA AX A0 AKA	05 05
	1SA D1 OTF 1SA C5 1SA C3 OE18	AP NX AP AP C7 1E18 AP C5 1SA	19. TO1C AP C7 1E18 AP MN LO	L0 MN 1SA C5 MN 1SA	C2 C7 1E18 C2 C7 1E18	B6 D1 OTF B6 D1 OTF	B4 NX AP B4 NX AP	TP CR4 TP CR4	TX CR3 L0 TX CR3 C5	C3 CR6 C3 CR6	AX A0 AKA AX A0 AKA	05 05
051	1SA CR5 A0 B3 1SA C3 OE18 AKA	AP MN LO AP C5 1SA	19. TO1C AP C7 1E18 AP MN LO	L0 MN 1SA C5 MN 1SA	C2 C7 1E18 C2 C7 1E18	B6 D1 OTF B6 D1 OTF	B4 NX AP B4 NX AP	TP CR4 TP CR4	TX CR3 L0 TX CR3 C5	C3 CR6 C3 CR6	AX A0 AKA AX A0 AKA	05 05
	1SA CR5 A0 B3 1SA C3 OE18 AKA	AP MN LO AP C5 1SA	19. TO1C AP C7 1E18 AP MN LO	L0 MN 1SA C5 MN 1SA	C2 C7 1E18 C2 C7 1E18	B6 D1 OTF B6 D1 OTF	B4 NX AP B4 NX AP	TP CR4 TP CR4	TX CR3 L0 TX CR3 C5	C3 CR6 C3 CR6	AX A0 AKA AX A0 AKA	05 05

1SA	AP	IX	B6	B4	B2	D	C4	CR5	MN
C3	C5	C7	D1	NX	CR4	CR3	CR6	AO	LO
OE18	1SA	1E18	OTF	AP	.	21	BL4	B1-	.
AKA	.	.	.	.	.	.	.	.	05

052 Logic test for flip-flop AP, zero side. Logic for AP is on boards 321, 320, 319, 318.
AP or test, zero side.

OSA	AP	TO	AX	AC	TX	TP	C4	03	04
CR5	MN	AK	C3	C7	C5	02	D1	K	CL7
NX	DC	TSO	CR4	CR2	CR6	AO	C2	B6	B4
LO	IX	B2	B1	OE18	OSA	1E18	OTF	AP	01
1SA	D	06	.	E	05	TP	TX	AC	04
03	MN	AK	K	02	CL7	AX	C3	CR3	CR5
CR2	TSO	B3	OE18	OSA	1E18	OTF	AP	01	.
OSA	AP	D	06	C4	03	04	CR5	MN	AK
C3	C7	C5	02	D1	K	CL7	NX	TO	DC
TSO	CR4	CR2	CR6	AO	C2	B6	B4	LO	IX
B2	B1	OE18	OSA	1E18	OTF	AP	02	.	04
1SA	AX	AC	TX	TP	TO	K	E	05	CR5
03	MN	AK	C5	02	CL7	C3	06	CR3	.
CR2	TSO	B3	OE18	OSA	1E18	OTF	AP	02	.
.
OSA	AP	K	E	05	TP	AX	AC	TX	04
CR5	MN	AK	C3	C7	C5	02	D1	CL7	NX
TO	DC	TSO	CR4	CR2	CR6	AO	C2	B6	B4
LO	IX	B2	B1	OE18	OSA	1E18	OTF	AP	03
1SA	C4	06	03	D	TO	TX	AC	04	MN
AK	C5	02	CL7	AX	C3	CR3	CR5	CR2	TSO
B3	OSA	OSA	1E18	03	AP	AC	.	AX	TP
OSA	AP	K	E	05	C7	AC	D	D1	CL7
C4	CR5	MN	AK	C3	CR6	C5	02	C2	B6
NX	TO	DC	TSO	CR4	CR2	CR6	AO	OTF	AP
B4	B4	IX	B2	B1	OE18	OSA	1E18	OTF	AP
04	04	04	03	TO	TP	MN	AK	C5	02
1SA	06	04	03	TO	CR2	TSO	B3	OE18	OSA
CL7	AX	C3	CR3	CR5	.	.	.	.	.
1E18	OTF	AP	04	.	.	.	.	.	.

053

Tape stops
Marker
number

054	OSA TP NX B4 05 1SA CL7 OTF OSA C4 DC IX 1SA CL7 1E18	AP C4 T0 L0 CR5 AX AP AP CR5 TS0 B2 MN AX OTF	K MN DC IX 06 C3 05 K C3 CR4 B1 AK C3 AP	E AK TS0 B2 03 CR3 E C7 CR2 OE18 06 CR3 06	05 C3 CR4 B1 T0 CR2 05 C5 CR6 OSA 04 CR5	04 C7 CR2 OE18 TP TS0 03 02 A0 1E18 TP CR2	TX C5 CR6 OSA MN B3 AC D1 C2 OTF T0 TS0	AC 02 A0 1E18 AK OE18 D CL7 B6 AP TX B3	D D1 C2 OTF C5 OSA AX NX B4 06 C5 OE18	AX CL7 B6 AP 02 1E18 TX T0 L0 02 OSA
055	OSA AX NX B4 07 1SA C3 AP OSA D T0 L0 1SA CR3 08	AP TX T0 L0 06 CR3 07 AP AX DC IX C3 CR5	MN C4 DC IX 04 CR5 C5 C4 TS0 B2 06 CR2	AK CR5 TS0 B2 TP CR2 K CR5 CR4 B1 TX TS0	K C3 CR4 B1 T0 TS0 E MN CR2 OE18 TP B3	E C7 CR2 OE18 TX B3 05 AK CR6 OSA T0 OE18	05 C5 CR6 OSA C5 OE18 04 C7 A0 1E18 MN OSA	03 02 A0 1E18 02 OSA 03 D1 C2 OTF AK 1E18	AC D1 C2 OTF CL7 1E18 02 CL7 B6 AP CL7 OTF	D CL7 B6 AP AX OTF AC NX B4 08 AX AP
056	OSA AX DC IX 1SA AX OTF OSA TX T0 L0	AP C4 TS0 B2 C7 C3 AP AP C4 DC IX	K CR5 CR4 B1 C5 CR3 09 K CR5 TS0 B2	E MN CR2 OE18 06 CR5 E AK CR4 B1	05 AK CR6 OSA TX CR2 05 C3 CR2 OE18	04 C3 A0 1E18 TP TS0 04 C7 CR6 OSA	03 D1 C2 OTF T0 B3 03 C5 A0 1E18	02 CL7 B6 AP MN OE18 AC D1 C2 OTF	AC NX B4 09 AK OSA D CL7 B6 AP	D T0 L0 CL7 1E18 AX NX B4 10

057	1SA AX OTF	MN C3 AP	06 CR3 10	02 CR5	TP CR2	T0 TS0	TX B3	AK OE18	C5 OSA	CL7 1E18
	OSA C4 T0 L0	AP CR5 DC IX	K MN TS0 B2	E AK CR4 B1	05 C3 CR2 OE18	04 C7 CR6 OSA	03 C5 A0 1E18	AC D1 C2 OTF	D CL7 B6 AP	TX NX B4 11
	1SA CL7 OTF	AX C3 AP	06 CR3 11	02 CR5	TP CR2	T0 TS0	TX B3	MN OE18	AK OSA	C5 1E18
	OSA 03 DC IX	AP 04 TS0 B2	AK CR5 CR4 B1	AC MN CR2 OE18	D C3 CR6 OSA	06 C7 A0 1E18	AX C5 C2 OTF	TX 02 B6 AP	TP NX B4 12	C4 T0 L0
	1SA 03 TS0	DI MN B3	K C5 OE18	CL7 02 OSA	T0 AX 1E18	E C3 OTF	05 06 AP	TP CR3 12	TX CR5	04 CR2
058	OSA 03 DC IX	AP 04 TS0 B2	AK CR5 CR4 B1	CL7 MN CR2 OE18	AC C3 CR6 OSA	06 C7 A0 1E18	AX C5 C2 OTF	TX 02 B6 AP	TP D1 B4 13	C4 T0 L0
	1SA 03 TS0 OSA	NX MN B3 AP	K C5 OE18 MN	D 02 OSA AX	T0 AX 1E18 K	E C3 OTF E	05 06 AP AC	TP CR3 13 D	TX CR5	04 CR2
	04 CR4 B1	CR5 CR2 OE18	C3 CR6 OSA	AX C7 A0 1E18	C5 C2 OTF	02 B6 AP	D1 B4 14 DC	CL7 L0	TP NX IX	C4 TS0 B2
	1SA C5 OSA	AK 02 1E18	TX CL7 OTF	T0 C3 AP	06 CR3 14	03 CR5	CR2	05 TS0	TP B3	04 OE18

[illegible]

1E18	OTF	AP	20	AC	MN	AK	C5	CL7	AX
1SA	CR6	TO	TP	OE18	OSA	1E18	OTF	AP	20
C3	CR2	TSO	B3	TX	K	E	06	05	04
OSA	AP	CR3	CR2	AC	TP	C4	MN	AK	C3
03	02	D	AX	AC	TO	DC	TSO	CR4	CR6
C7	C5	D1	CL7	NX	IX	B2	B1	OE18	OSA
A0	C2	B6	B4	LO	.	.	.	.	.
1E18	OTF	AP	21	.	.	.	.	.	.
062	CR5	TO	TP	AC	MN	AK	C5	CL7	AX
1SA	TSO	B3	OE18	OSA	1E18	OTF	AP	21	.
C3	AP	AC	TSO	K	E	06	05	04	03
OSA	D	AX	TP	CR5	MN	AK	C3	C7	C5
02	CL7	NX	DC	CR4	CR2	CR6	A0	C2	B6
D1	LO	IX	B2	B1	OE18	OSA	1E18	OTF	AP
B4	.	.	.	.	.	.	.	.	.
22	C4	TX	TO	TP	MN	AK	C5	CL7	AX
1SA	CR3	CR5	CR2	B3	OE18	OSA	1E18	OTF	AP
C3	AP	K	E	06	05	04	03	02	D
22	AC	C4	CR5	MN	AK	C7	D1	CL7	NX
OSA	DC	TSO	OTF	CR2	CR6	LO	IX	B2	B1
AX	OSA	1E18	.	AP	23	.	.	.	.
TO	.	.	.	.	.	.	.	.	.
OE18	.	.	.	.	.	.	.	.	.
063	A0	C5	C2	B6	B4	TP	TX	C3	TO
1SA	MN	AK	CL7	AX	CR3	CR5	CR2	TSO	B3
AC	OSA	1E18	OTF	AP	23	.	.	.	.
OE18	AP	C5	K	E	06	05	04	03	02
OSA	AX	AC	C4	CR5	MN	AK	C7	D1	CL7
D	TO	DC	TSO	OTF	CR2	CR6	A0	IX	B2
NX	OE18	OSA	1E18	CR4	AP	24	C3	TO	AC
B1	LO	C2	B6	OTF	TP	TX	TSO	B3	OE18
1SA	AK	CL7	AX	CR3	CR5	CR2	.	.	.
MN	1E18	OTF	AP	24	.	.	.	.	.
OSA	AP	B3	K	E	06	05	04	03	02
OSA	TX	TP	C4	CR5	MN	AK	C3	C7	C5
AC	CL7	NX	TO	DC	TSO	CR4	CR2	CR6	A0
D1	LO	IX	OSA	1E18	OTF	AP	25	TO	TP
C2	AX	OE18	B6	B4	B2	B1	D	CR5	CR2
1SA	AC	AC	AK	C5	CL7	C3	CR3	.	.
TX	OE18	OSA	1E18	OTF	AP	25	.	.	.
TSO	.	.	.	.	.	.	.	.	.

064	AP and test, zero side.	1SA 06 K	05	C5	02	CR3	B3	OE18
		OSA 1E18 1TF	01	DA-	02	OM	07	AKA
		1SA D K	05	C5	02	CR3	B3	OE18
		OSA 1E18 1TF	01	06-	02	OM	07	AKA
		13 KIOC	05	E	05	C5	02	CR3
		1SA TO D	06	AP	01	TOB	04	OM
		B3 OE18 OSA	13	1E18	02	05	02	CR3
		07 AKA	13	KIOC	02	05	02	OM
		1SA AC TX	06	TP	02	05	02	CR3
		CR3 B3 OE18	13	1E18	02	05	02	OM
		1SA AX TX	06	TP	02	05	02	CR3
		CR3 B3 OE18	13	1E18	02	05	02	OM
		AKA 11 OLP	06	K06-	02	05	02	CR3
		1SA AX AC	11	TOX-	02	05	02	CR3
		B3 OE18 OSA	13	1E18	02	05	02	CR3
		1SA AX AC	06	TP	02	05	02	CR3
		B3 OE18 OSA	13	1E18	02	05	02	CR3
		1SA AX AC	06	TP	02	05	02	CR3
		CR3 B3 OE18	13	1E18	02	05	02	CR3
		TP- TOX-	15	TOX-	02	05	02	CR3
		1SA AX AC	06	TP	02	05	02	CR3
		CR3 B3 OE18	13	1E18	02	05	02	CR3
		TP- TOX-	15	TOX-	02	05	02	CR3
		1SA AX AC	06	TP	02	05	02	CR3
		OSA 1E18 1TF	07	AKA	02	05	02	CR3
		05 CR5-	07	05	02	05	02	CR3
		1SA K E	07	05	02	05	02	CR3
		OE18 OSA 1E18	13	1E18	02	05	02	CR3
		AKA K E	07	05	02	05	02	CR3
		1SA K E	07	05	02	05	02	CR3
		B3 OE18 OSA	13	1E18	02	05	02	CR3
		OM 07 AKA	07	05	02	05	02	CR3
		1SA K	06	TP	02	05	02	CR3
		B3 OE18 OSA	13	1E18	02	05	02	CR3
		01 TOB	06	TP	02	05	02	CR3
		1SA E	06	TP	02	05	02	CR3
		B3 OE18 OSA	13	1E18	02	05	02	CR3
		01 TOB	06	TP	02	05	02	CR3
		1SA C4	03	TOX-	02	05	02	CR3
		OSA 1E18 1TF	07	AKA	02	05	02	CR3
		07 AKA	07	05	02	05	02	CR3
		1SA K	06	TP	02	05	02	CR3
		B3 OE18 OSA	13	1E18	02	05	02	CR3
		01 TOB	06	TP	02	05	02	CR3
		1SA E	06	TP	02	05	02	CR3
		B3 OE18 OSA	13	1E18	02	05	02	CR3
		01 TOB	06	TP	02	05	02	CR3
		1SA C4	03	TOX-	02	05	02	CR3
		OSA 1E18 1TF	07	AKA	02	05	02	CR3
		07 AKA	07	05	02	05	02	CR3
		1SA K	06	TP	02	05	02	CR3
		B3 OE18 OSA	13	1E18	02	05	02	CR3
		01 TOB	06	TP	02	05	02	CR3
		1SA E	06	TP	02	05	02	CR3
		B3 OE18 OSA	13	1E18	02	05	02	CR3
		01 TOB	06	TP	02	05	02	CR3
		1SA C4	03	TOX-	02	05	02	CR3
		OSA 1E18 1TF	07	AKA	02	05	02	CR3
		07 AKA	07	05	02	05	02	CR3
		1SA K	06	TP	02	05	02	CR3
		B3 OE18 OSA	13	1E18	02	05	02	CR3
		01 TOB	06	TP	02	05</		

Tape stops	Marker number
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[illegible]

Tape stops	Marker number
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100	100

[illegible]

079

083	1SA B3 AKA	TX OE18 AK	11	T0 OSA	06 1E18 MAX3	14	03 1TF	DC AP MAX1	16	05	15	C5 MAX2	02 AX-	CR3	07
	1SA 02	AK CR3		AX B3 K06-	TX OE18		T0 OSA	06 1E18		03 1TF	DC AP	05	05	C5 AKA	
	1SA B3	OLP TX		K06- T0	06 1E18	14	03 1TF	DC AP	15	05	16	C5 MAX1	02 MN-	CR3	07
	AKA	OE18 AK		OSA	06 1E18		T0 OSA	06 1E18		03 1TF	DC AP	05	05	C5	
	1SA	AX		MN	TX		T0 OSA	06 1E18		03 1TF	DC AP	05	05	C5 MAX1	
	02	CR3		B3	OE18	11	03 1TF	DC AP	14	05	17	C5 MAX0	05	C5	
	AX	.		10	TX		T0 OSA	06 1E18		03 1TF	DC AP	05	05	C5 AKA	
	1SA	AK		MN	OE18		T0 OSA	06 1E18		03 1TF	DC AP	05	05	C5	
	02	CR3		B3	OE18	10	03 1TF	DC AP	14	05	17	C5 MAX0	05	C5	
	AX	OF		.	OLP		T0 OSA	06 1E18		03 1TF	DC AP	05	05	C5 AKA	
	1SA	MN		06	03		T0 OSA	06 1E18		03 1TF	DC AP	05	05	C5	
	OE18	OSA		1E18	1TF		T0 OSA	06 1E18		03 1TF	DC AP	05	05	C5	
	OM	.		10	OLP		T0 OSA	06 1E18		03 1TF	DC AP	05	05	C5	
084	1SA 02 MN-	AX CR3		AK B3	TX OE18	11	03 1TF	DC AP	14	05	15	C5 MAX2	05	C5	
	1SA	CR3		AK	K06-		T0 OSA	06 1E18		03 1TF	DC AP	05	05	C5	
	02	MN		B3	TX		T0 OSA	06 1E18		03 1TF	DC AP	05	05	C5	
	AX-	CR3		OF	OE18	06	03 1TF	DC AP	14	05	15	C5 MAX3	05	C5	
	1SA	MN		AX	TX		T0 OSA	06 1E18		03 1TF	DC AP	05	05	C5	
	02	CR3		B3	OE18	11	03 1TF	DC AP	14	05	15	C5 MAX2	05	C5	
	1SA	OLP		AX	AK		T0 OSA	06 1E18		03 1TF	DC AP	05	05	C5	
	CR3	MN		AX	OSA		T0 OSA	06 1E18		03 1TF	DC AP	05	05	C5	
	DA-	B3		OM	AK		T0 OSA	06 1E18		03 1TF	DC AP	05	05	C5	
	1SA	TS0		T0	C5	04	06 OF	DC AP	15	05	16	C5 MAX1	05	C5	
	AP	C3		AX-	TS0	18	06 OF	DC AP	15	05	16	C5 MAX1	05	C5	
	1E18	1TF		AX	TS0		06 OF	DC AP	15	05	16	C5 MAX1	05	C5	
	OLP	K06-		AP	TS0		06 OF	DC AP	15	05	16	C5 MAX1	05	C5	

Tape stops
Marker number

085	1SA	AX	18	T0	C5	CR3	B3	OE18	OSA	11	1E18	1TF
	AP	.	TS0-	.	06	OM	.	AKA	.	07	OLP	K06-
	1SA	K	E	CR3	B3	05	04	03	02	11	AX	TS0
	T0	C5	CR3	04	OM	OE18	07	1E18	11	11	AP	.
	0Y	.	04	AX	TS0	T0	AKA	CR3	04	04	K06-	18
	1SA	K	AX	AP	.	18	C5	.	OM	04	OE18	OSA
	1E18	1TF	AP	18	0Y	0Y	K	.	04	04	.	AKA
	.	11	K06-	18	TS0	T0	C5	CR3	B3	04	OE18	07
	1SA	E	AX	18	0Y	0Y	E	.	OM	04	.	OSA
	1E18	1TF	AP	18	0Y	0Y	.	CR3	04	04	OE18	AKA
	1SA	06	K06-	18	TS0	T0	C5	CR3	B3	04	OE18	OSA
086	1SA	11	AX	18	TS0	T0	C5	CR3	B3	04	OE18	07
	1E18	06	AX	18	0Y	0Y	06	.	OM	04	.	AKA
	1SA	11	AP	18	TS0	T0	C5	CR3	B3	04	OE18	OSA
	1E18	05	K06-	18	0Y	0Y	05	.	OM	04	OE18	AKA
	.	11	AP	18	0Y	0Y	.	CR3	04	04	.	OSA
	1SA	1TF	K06-	18	0Y	0Y	.	.	.	.	.	AKA
	1E18	05	AX	18	TS0	T0	C5	CR3	B3	04	OE18	07
	.	11	AP	18	0Y	0Y	.	.	.	.	.	AKA
	1SA	04	AX	18	TS0	T0	C5	CR3	B3	04	OE18	OSA
	1E18	1TF	AP	18	0Y	0Y	04	.	OM	04	.	AKA
	.	11	K06-	18	0Y	0Y	.	.	.	.	.	OSA
087	1SA	11	AX	19	TS0	T0	C5	OE18	OSA	07	1E18	1TF
	AP	.	CR2	19	0Y	0Y	B3	05	05	05	AKA	.
	CR5-	CR4	CR2	19	0Y	0Y	B3	07	07	20	1E18	1TF
	1SA	CR4	CR2	19	0Y	0Y	B3	07	07	20	1E18	1TF
	AP	CR3	CR5-	19	0Y	0Y	T0	04	04	05	CR6-	OSA
	1SA	1TF	CR4	19	0Y	0Y	.	04	04	05	OE18	.
	1E18	.	AP	19	0Y	0Y	.	04	04	05	0D	.
	AKA	.	.	19	0Y	0Y	.	.	.	.	.	OSA
	1SA	TX	CR4	19	0Y	0Y	T0	07	07	22	OE18	OSA
	1E18	1TF	AP	19	0Y	0Y	B3	07	07	22	TOX-	TX-
	1SA	CR3	CR6	20	0Y	0Y	B3	07	07	22	1E18	1TF
088	1SA	TX	CR6	20	0Y	0Y	B3	07	07	22	1E18	1TF
	AP	.	CR3	20	0Y	0Y	B3	07	07	22	1E18	1TF
	1SA	TX	CR6	20	0Y	0Y	B3	07	07	22	1E18	1TF
	AP	.	CR3	20	0Y	0Y	B3	07	07	22	1E18	1TF
	1SA	TX	CR6	20	0Y	0Y	B3	07	07	22	1E18	1TF
	AP	.	CR3	20	0Y	0Y	B3	07	07	22	1E18	1TF
	1SA	TX	CR6	20	0Y	0Y	B3	07	07	22	1E18	1TF
	AP	.	CR3	20	0Y	0Y	B3	07	07	22	1E18	1TF
	1SA	TX	CR6	20	0Y	0Y	B3	07	07	22	1E18	1TF
	AP	.	CR3	20	0Y	0Y	B3	07	07	22	1E18	1TF
	1SA	TX	CR6	20	0Y	0Y	B3	07	07	22	1E18	1TF

093

B3	1SA	AX	04	OM	B6	07	AKA	B1	11	OLP	K06-	18	AX-	04
1SA	OE18	OSA	07	IX	1TF	11	B4	B1	25	QT1	TO	C5	CR3	
OM				1E18			AP	K06-			BL4	B2-		
				AKA			OLP				AX-			

094

1SA	OE18	AX	07	IX	B6	11	B4	B2	25	QT1	TO	C5	CR3	04
OE18		OSA	07	1E18	1TF		AP				BL4	B1-		
OM				AKA			OLP	K06-			AX-			

D or test, one side. Logic for one side D is on board 231.

OSA	IC	K	TP	OE18	1SA	1TF	01
1SA	D	PS	OE18	1SA	1E18	1TF	
OSA	E	TP	OE18	1SA	1E18	1TF	
1SA	AK	D	K	OB3	OFL0	PS	
1E18	1TF	D					
OSA	AK	OB3	PS	OE18	1E18	1TF	03
1SA	D	E	IC	TP	OE18	1SA	
D							
OSA	E	OFL0	E4	OE18	1E18	1TF	04
1SA	D	K	PE	PS	1SA	1E18	
OSA	E	PE	E4	OE18	1E18	1TF	05
1SA	D	K	OFL0	PS	1SA	1TF	

095

1SA	D	E	TP	E4	PS	OE18	1E18
OTF	D			*TD	PS		
1SA	D	E	OB3	OFL0	PE	OE18	1SA
1E18	OTF	D	KSU0		ICP	IC	
*TD	PS						03
1SA	AK	D	OFL0	PE	PS	1SA	1E18
OTF	D			ICP	KDIC		
PS							
1SA	AK	D	PE	OFL0	TP	OE18	04
1SA	1E18	OTF	OB3	TPB	*TD	PS	
OFL0		PE				PS	
1SA	AK	D	OB3	E4	OE18	1SA	1E18
OTF	D			ICP	K		
PS				*ER			

Marker number	Tape stops
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
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36	36
37	37
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42	42
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44	44
45	45
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52	52
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68	68
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73	73
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75	75
76	76
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82	82
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84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

1SA	D	E		IC	TP	E4	PS	OE18	1SA	1E18
OTF	D	.	03	*TD	.	.	.	.	.	.
1SA	D	E		IC	K	TP	PS	OE18	1SA	1E18
OTF	D	.	04	KED2	.	03 *TD	PS	.	05 KED2	E
1SA	D	E		IC	K	TP	PS	OE18	1SA	1E18
OTF	D	.	05	KED2	.	03 *TD	PS	.	04 KED2	E
1SA	AK	D		K	OB3	OFL0	E4	PS	OE18	1SA
1E18	OTF	D		05 *ER	.	.	01 ICP	KDTC	K	.
ERR-	PE-	.	03	*TD	PS	.	.	.	.	.

097 D or test, zero side. Logic for zero side D is on boards 231, 232. Logic for matrix 009 and/or shorting cable 012.

OSA	TX	CR5	D	E	K	OE18	OSA	1E18	OTF
D	01								
1SA	B2	CR6	0B5	05	04	03	0E18	0SA	1E18
OTF	D		01						
OSA	TX	D	E	K	0B5	03	0E18	0SA	1E18
OTF	D	02							
1SA	B2	06	0E18	0SA	1E18	OTF	D	02	
OSA	TX	CR7	CR6	D	E	K	0B5	06	05
OE18	OSA	1E18	OTF	D		03			
1SA	B2	CR5	03	02	0E18	0SA	1E18	0TF	D

098	15A	AK	CP6	E	K	OP2	PE	PS	OE18	OSA
1E18	OTF	D		05	PS	OE18	OSA	1E18	OTF	D
OSA	CP6	D		OP2						
	06									
15A	AK	E		K	OP3	OP1	P	TS0	OE18	OSA
1E18	OTF	D			06					

[illegible]

Marker number	Tape stops
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
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79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

CH 103

Release the COMPUTE button. Start the tape reader.

ISA	AK	CP6	E	K	OP2	PE	TS0	PS	OE18
OSA	1E18	1TF	D	.	05	.	CP6	.	.
OSA	AK	B2	E	OB5	OP3	OP1	06	PE	TS0
OSA	1E18	1E18	1TF	D	.	06	06	.	.
OSA	OSA	1E18	1TF	D	OP1	KD1	TS0	OE18	OSA
1SA	B2	K	OB5	OB3	.	06	TS0	02	KA
1E18	1TF	D	.	06 EAKO	.	01 KA	K	.	.

1. Depress matrix button 8.
2. Depress matrix button F.
3. Depress weapon type 1 button.
4. Depress battery A button.
5. Start the tape reader.

704

C3 or test, one side. Logic for one side C3 is on boards 227, 228, 332, 401, 402, 403, 404, 405. Logic for matrix 009 and/or shorting cable 012.

[illegible]

105

T0	B6	B5	B3	B1	C3	C6	TP
1SA	1TF	C3	.	04	.	06	.
OE18	B1	E	K	05	04	03	02
OSA	1E18	1TF	C3	.	05	.	.
E4	B6	B5	B3	C3	06	TP	OE18
1SA	C3	.	05	04	.	.	.
1SA	E	K	05	06	03	02	E4
OSA	1TF	C3	B2	06	.	.	.
OE18	B6	B5	B2	B1	C3	06	TP
1SA	1TF	C3	.	06	.	.	.
1SA	1E18	1TF	.	06	.	.	.

CH 106

C3 and test, one side.

Case	Sex	Age	Site	Pathologic	Immunohistochemical	Genetic	Prognosis	Survival
1	M	65	Rectum	Adenocarcinoma	CK20, CK5/6	18q21	Stage III	10 years
2	F	55	Colon	Adenocarcinoma	CK20, CK5/6	18q21	Stage II	8 years
3	M	70	Rectum	Adenocarcinoma	CK20, CK5/6	18q21	Stage IV	5 years
4	F	60	Colon	Adenocarcinoma	CK20, CK5/6	18q21	Stage III	12 years
5	M	68	Rectum	Adenocarcinoma	CK20, CK5/6	18q21	Stage IV	7 years
6	F	58	Colon	Adenocarcinoma	CK20, CK5/6	18q21	Stage II	9 years
7	M	72	Rectum	Adenocarcinoma	CK20, CK5/6	18q21	Stage IV	6 years
8	F	62	Colon	Adenocarcinoma	CK20, CK5/6	18q21	Stage III	11 years
9	M	66	Rectum	Adenocarcinoma	CK20, CK5/6	18q21	Stage IV	8 years
10	F	56	Colon	Adenocarcinoma	CK20, CK5/6	18q21	Stage II	10 years

1SA	TX	TP	ND	OP3	06	01	TP
PS	OE18	1SA	06	BL4	06	01	NDX-
TXF	TX	.	.	.	.	.	.

1. Depress matrix button G.
2. Depress battery B button.
3. Start the tape reader

107 C7 or test, one side. Logic for one side C7 is on boards 206, 207, 208, 402, 403, 404, 405, 407.
Logic for matrix 009 and/or shorting cable 012.

OSA	TX	CR7	1E18	1TF	C7	01	.	01
1SA	B2	C7	1SA	1E18	1TF	C7	.	.
OSA	B3	E	OE18	03	02	OE18	1SA	01
1E18	1TF	C7	02	.	06	TP	.	OE18
1SA	TX	B6	B1	C7	.	.	.	OE18
1SA	1E18	1TF	02	.	03	02	.	OE18
OSA	B4	B1	03	C7	06	TP	.	OE18
1SA	TX	1TF	03	.	.	.	.	OE18
1SA	1E18	1TF	03	.	.	.	.	OE18
OSA	B4	B3	E	04	04	03	02	.
OE18	1SA	1E18	C7	04	TP	OE18	1SA	.
1SA	TX	B6	B2	04	.	.	.	.
1E18	1TF	C7	04	.	.	.	.	.

108

OSA	B4	B3	E	05	04	03	02
OE18	1SA	1E18	C7	05	TP	OE18	1SA
1SA	TX	B6	B1	05	.	.	.
1E18	1TF	C7	05	03	02	OE18	1SA
OSA	B5	E	06	06	TP	OE18	0E18
1E18	1TF	C7	B3	C7	.	.	.
1SA	TX	B6	06	.	.	.	.
1SA	1TF	C7	06	.	.	.	.

CH

109

C7 and test, one side.

1SA	TX	B6	B5	B4	B3	B2	B1	C7	D6
D3	ND	06	TP	E2	OE18	1SA	1E18	OTF	C7
.	06	TRC	01	TXF	TX	02	T1	BL4	B3
1SA	C7	B6	06	TX	TP	OE18	1SA	1E18	OTF
C7	.	06	BLO	B3	C7	D8	06	TP	OE18
1SA	TX	B6	B4	07	*F12	F12	10	TOP	B6
1SA	1E18	OTF	C7	.	.	.	.	.	.
.	16	TLC	B6	.	.	.	.	.	.

1. Depress battery C button.
2. Start the tape reader.

Tape stops	Marker number
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
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21	21
22	22
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32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
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48	48
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50	50
51	51
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54	54
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56	56
57	57
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59	59
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61	61
62	62
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64	64
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66	66
67	67
68	68
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72	72
73	73
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75	75
76	76
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80	80
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82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

110	C3 or test, one side.	Logic for one side C3 is on boards 228, 227, 403.	Logic for matrix 009.
	OSA B5 B1	E K	02 E4
	OE18 1SA 1E18	1TF C3	.
	1SA T0 TX	B6 B3	TP OE18
	1SA 1E18 1TF	C3 .	.
		07	.
111	C3 and test, one side.		
	1SA T0 TX	B5 B3	D7 D4
	ND 06 TP	OE18 1SA	C3 C3
	TRC . 01 NDX-	TX .	. 05 BL3
	B2 .	B6 B3	.
	1SA T0 TX	B6 B3	ND .
	TP OE18 1SA	1E18 OTF	06 01 NDX-
	TXF TX	TXF TX	.

1. Depress battery D button.
2. Start the tape reader.

112 C7 or test, one side. Logic for one side C7 is on boards 206, 207, 208, 323, 404. Logic for matrix 009.

113	05	04	03	02
05A	B6	B3	E	K
05E18	1SA	1E18	1TF	C7
1SA	TX	B4	B2	B1
PS	0E18	1SA	1E18	1TF
05A	B6	B4	B1	E
02	0E18	1SA	1E18	1TF
1SA	TX	B5	B3	B2
PS	0E18	1SA	1E18	1TF
05	11	05	05	11
04	0P1	05	0P3	0P3
03	04	04	04	04
02	06	06	06	06
TP	0P1	0P1	0P2	0P2
03	05	05	05	05
03	12	12	12	12
TP	0P1	0P1	0P2	0P2
03	04	04	04	04
TP	0P1	0P1	0P2	0P2
03	05	05	05	05
03	12	12	12	12
TP	0P1	0P1	0P2	0P2
03	04	04	04	04
TP	0P1	0P1	0P2	0P2
03	05	05	05	05
03	12	12	12	12
TP	0P1	0P1	0P2	0P2
03	04	04	04	04
TP	0P1	0P1	0P2	0P2
03	05	05	05	05
03	12	12	12	12
TP	0P1	0P1	0P2	0P2
03	04	04	04	04
TP	0P1	0P1	0P2	0P2
03	05	05	05	05
03	12	12	12	12
TP	0P1	0P1	0P2	0P2
03	04	04	04	04
TP	0P1	0P1	0P2	0P2
03	05	05	05	05
03	12	12	12	12
TP	0P1	0P1	0P2	0P2
03	04	04	04	04
TP	0P1	0P1	0P2	0P2
03	05	05	05	05
03	12	12	12	12
TP	0P1	0P1	0P2	0P2
03	04	04	04	04
TP	0P1	0P1	0P2	0P2
03	05	05	05	05
03	12	12	12	12
TP	0P1	0P1	0P2	0P2
03	04	04	04	04
TP	0P1	0P1	0P2	0P2
03	05	05	05	05
03	12	12	12	12
TP	0P1	0P1	0P2	0P2
03	04	04	04	04
TP	0P1	0P1	0P2	0P2
03	05	05	05	05
03	12	12	12	12
TP	0P1	0P1	0P2	0P2
03	04	04	04	04
TP	0P1	0P1	0P2	0P2
03	05	05	05	05
03	12	12	12	12
TP	0P1	0P1	0P2	0P2
03	04	04	04	04
TP	0P1	0P1	0P2	0P2
03	05	05	05	05
03	12	12	12	12
TP	0P1	0P1	0P2	0P2
03	04	04	04	04
TP	0P1	0P1	0P2	0P2
03	05	05	05	05
03	12	12	12	12
TP	0P1	0P1	0P2	0P2
03	04	04	04	04
TP	0P1	0P1	0P2	0P2
03	05	05	05	05
03	12	12	12	12
TP	0P1	0P1	0P2	0P2
03	04	04	04	04
TP	0P1	0P1	0P2	0P2
03	05	05	05	05

OSA 04 1SA 1SA OSA 03 1SA 1TF	B6 03 TX 1E18 B6 02 TX C7	B4 02 B5 1TF B4 E2 B5	B3 OE18 B2 C7 B3 OE18 B1	B1 1SA C7 B2 1SA C7	E 1TF OP1 13 D4 1E18 06	K C7 06 E 1TF TP	OP3 TP K C7 OE18	OP2 PS 05 1SA	05 OE18 04 14 1E18	
114	OSA E2 1SA 1SA OSA 02 1SA 1E18 OSA 02 T T OE18 1SA T T OE18	B6 OE18 TX 1E18 B6 E2 TX 1TF B6 I I 1SA TX I I 1SA	B5 1SA B3 1TF B5 OE18 B3 C7 B5 E7 M M 1E18 B1 M M 1E18	D6 1E18 B2 C7 B2 1SA C7 B3 E E 1TF C7 E E 1TF	E 1TF B1 B1 1E18 D8 B2 B2 B2 C7 E D D C7 06 C7	15 C7 C7 E 1TF D5 E D D TP D D	05 D3 K C7 06 K E E E E6 E E	15 04 06 05 TP 05 L L L L L	03 TP 04 OE18 04 03	02 OE18 03 03 1SA 03 Y Y Y Y Y
115	C7 and test, one side. 1SA OE18 1SA 03 C7 1SA OE18 TX 1SA 1E18 T1 PS TXF 1SA 1E18	B6 1SA C7 02 TX 1SA TX OTF BL4 TX OE18 TX C7 OTF	B4 1E18 D6 E2 NDX- B6 BLO B6 C7 B1- B6 1SA B1 B6 1SA B1 C7	B2 OTF D5 B4 OTF B1- B2 B5 1E18 06 C7	B1 C7 D4 E7 B3 C7 C7 TRS C7 C7 OTF TX TRS	CR7 D3 B2 BL3 ND ND ND C7 TP	01 CR7 E OE18 C7 TRS B2 06 NDX- 01 OP2 B5	ND K 1SA ND TP TXF OP1 BL5 B4	06 05 1E18 06 NDX- 01 OE18 TX	TP 04 OTF TP TXF 1SA TP NDX- 1SA

Tape stops
Marker number

CH 116

1SA	TX	B6	B5	B3	C7	06	TP	OE18	1SA
1E18	OTF	C7	B4	05	BL6	B1	C7	ND	06
1SA	TX	B6	1E18	OTF	B3	B3	*F10	F10	01
TP	OE18	1SA	TX	02	T1	B3	06	T15	TOP
NDX-	TXF	15	TX	TLC	B6	D5	06	TP	E2
B6	TX	B6	B5	B3	B5	07	TRC	BL1	B2-
1SA	1SA	1E18	OTF	C7	OTF	OE18	1SA	1E18	OTF
OE18	C7	B6	06	TX	TX	06	03	1E18	06
1SA	07	BL3	07	07	07	07	07	07	07
C7	07	07	07	07	07	07	07	07	07

1. Depress battery E button.
2. Start the tape reader

117

C3 or test, one side. Logic for one side C3 is on boards 208, 226, 227, 228. Logic for matrix 009.

OSA	B5	B3	B2	B1	E	K	05	04	03
02	E4	OE18	1SA	1E18	1TF	C3	OE18	08	1E18
1SA	T0	TX	B6	C3	06	TP	05	04	03
1TF	C3	08	E	08	03	02	05	04	03
OSA	B5	B3	OE18	K	OP3	OP2	05	04	03
02	E4	OE18	1SA	1E18	1TF	C3	09	06	TP
1SA	T0	TX	B6	B2	B1	C3	OP1	06	03
PS	OE18	1SA	1E18	1TF	C3	09	04	03	02
OSA	B6	B1	D4	E	K	05	04	03	TP
E2	E4	OE18	1SA	1E18	1TF	C3	10	06	03
1SA	T0	TX	B4	B3	B2	C3	D7	06	03
OE18	1SA	1E18	1TF	C3	03	10	05	04	03
OSA	B6	B3	B2	E	K	OP1	05	04	03
02	E4	OE18	1SA	1E18	1TF	C3	11	04	03

Marker	Tape stops	number
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
25	25	25
26	26	26
27	27	27
28	28	28
29	29	29
30	30	30
31	31	31
32	32	32
33	33	33
34	34	34
35	35	35
36	36	36
37	37	37
38	38	38
39	39	39
40	40	40
41	41	41
42	42	42
43	43	43
44	44	44
45	45	45
46	46	46
47	47	47
48	48	48
49	49	49
50	50	50
51	51	51
52	52	52
53	53	53
54	54	54
55	55	55
56	56	56
57	57	57
58	58	58
59	59	59
60	60	60
61	61	61
62	62	62
63	63	63
64	64	64
65	65	65
66	66	66
67	67	67
68	68	68
69	69	69
70	70	70
71	71	71
72	72	72
73	73	73
74	74	74
75	75	75
76	76	76
77	77	77
78	78	78
79	79	79
80	80	80
81	81	81
82	82	82
83	83	83
84	84	84
85	85	85
86	86	86
87	87	87
88	88	88
89	89	89
90	90	90
91	91	91
92	92	92
93	93	93
94	94	94
95	95	95
96	96	96
97	97	97
98	98	98
99	99	99
100	100	100

[illegible]

1. Depress matrix button 1.
2. Depress matrix button A.
3. Depress weapon type 2 button.
4. Start the tape reader.

C7 and test, one side. Logic for one side C7 is on boards 206, 207, 208, 402, 403, 404, 405, 407. Logic for matrix 009 and/or shorting cable 012.

[illegible]

123	TX	B6	B4	B1	C7	06	TP	E6	PS
1SA	TX	B6	B4	B1	C7	06	TP	E6	PS
OE18	1SA	1E18	OTF	C7	.	*F14	OP3-	.	T1
BL4	B2-	.	TLC	B6	.	.	.	.	.
1SA	TX	B6	B4	B1	C7	OP3	OP2	06	TP
E6	PS	OE18	1SA	1E18	OTF	C7	.	08 *F14	OP2
02	T1	BL4	B2-	.	17	B6	OP1	06	.
1SA	TX	B6	B4	B1	C7	OP3	OP1	06	TP
E6	PS	OE18	1SA	1E18	OTF	C7	.	08 *F14	OP1
02	T1	BL4	B2-	.	17	B6	.	.	.
1SA	TX	B6	B5	B4	B1	C7	D4	OP3	06

Tape stops	Marker number
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
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30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
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52	52
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54	54
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56	56
57	57
58	58
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62	62
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65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

126	1SA E6	TX PS	01	B4 OE18 TXF	15	B2 1SA TX	B1 1E18	02	C7 OTF	ND C7	OP3	11	06 *F20	TP OP1- T15
	BLO	B3-		B6	B4	BLO	B3-	B1	T1	B64- B16	B6- B2	D5	D4	
	1SA	TX		OP3	OP1	B4	B2	B1	TP	C7	D6	E7		
	D3	ND		1SA	1E18	OP1	OTF	C7		E2	11	T19	01	NDX-
	PS	OE18		TXF	*F2	*F2	F2	C7						
	TXF	TX			02	B3	B2	C7		ND	OP3	OP2	12	*F22
	1SA	TX		B5	B3	OE18	1SA	1E18		OTF	C7			
	06	TP	01	PS	TXF	OE18	TX			TRS	B6-	OP1	TP	01
	OP3			NDX-	B5	B3	B2	C7		ND	12	*F22	06	
	1SA	TX		B5	1E18	1E18	OTF	C7		ND	13	BL5	OP2-	
	PS	TXF		1SA			TRS	B6-					B3	
	NDX-			TX			03							
127	1SA	TX		B5	B3	B3	B2	C7		ND	OP2	06	TP	01
	PS	OE18		1SA	1E18	1E18	OTF	C7			12	*F22	OP1	
	NDX-	TXF		TX			TRS	B6-						
	1SA	TX		B5	B3	B3	B2	C7		ND	OP2	OP1	06	
	TP	OE18		TX	1E18	1E18	OTF	C7			12	*F22	PS-	01
	NDX-	TXF		B6	B5	B5	TRS	B6-						
	1SA	TX		PS	OE18	OE18	B3	B2		C7	ND	OP2	OP1	
	06	TP		TXF	TX	TX	1SA	1E18		OTF	C7	04	BL5	12
		01		B5	B2	B2	B1	C7		F4	ND	OP2	OP1	
	1SA	TX		E2	PS	PS	OE18	1SA		D4	ND	C7	C7	
	BL1	TP	01	NDX-	TXF	TX		*F4		1E18	OTF	06	TP	01
	1SA	TX		B5	B2	B2	B1	C7			OP3	OP1	OP3	
	PS	OE18		1SA	1E18	1E18	OTF	C7			13	*F24	06	
	NDX-	TXF		TX			TRS	B6-						
128	1SA	TX		B5	B2	B2	C7	ND		OP2	OP1	06	TP	01
	PS	OE18		1SA	1E18	1E18	OTF	C7			*F24	OP2		
	NDX-	TXF		TX			TRS	B6-			13	B3-	0E18	
	1SA	TX		B5	B2	B2	C7	ND			TP	PS	TXF	
	1SA	1E18		OTF	C7	C7		*F24		OP1-		01	NDX-	
	TX		04	TRS	B6-	B6-				OP1				
	1SA	TX		B5	B2	B2	C7	ND		OP1	06	TP	0E18	
	1SA	1E18		OTF	C7	C7		*F24		PS-		01	TXF	
	TX		04	TRS	B6-	B6-								
	1SA	TX		B6	B4	B4	B2	C7		ND	OP1	06	TP	
	PS	OE18		1SA	1E18	1E18	OTF	C7			13	TLS	NDX-	
	TXF	TX		B5	T1	T1	B2	C7						
	1SA	TX		B5	B3	B3	OTF	B1-		D4	ND	OP1	06	
	TP	E2	01	PS	OE18	OE18	B2	C7		OTF	C7		BL5	
		NDX-		TXF	TX	TX	1SA	1E18		B6-		12	*F22	0P2-

139	1SA TP	T0 E1	TX PS	B4 OE18	B1 1SA	C3 1E18	OP3 OTF	OP2 C3	OP1 .	11 *F19	06 *F19
	OP1	.	17 BL7	B1	B1	C3	OP3	OP2 C3	OP1 .	11 *F19	06 *F19
	1SA E1	T0 OE18	TX 1SA	B4 1E18	B1 OTF	C3	OP3	OP2 C3	OP1 .	11 *F19	06 *F19
	BL7	B1	.	.	B5	B1	C3	OP3	OP1 .	11 *F19	06 *F19
	1SA TP	T0 PS	TX OE18	B6 1SA	B5 1E18	OTF	C3	OP3	OP1 .	11 *F19	06 *F19
	BL2	B3-	.	BL4	B2-	B2	C3	OP3	OP1 .	11 *F19	06 *F19
	1SA OP3	T0 OP2	TX 06	B4 TP	B3 E2	PS	OE18	OP3	OP1 .	11 *F19	06 *F19
	C3	OP2	11 BL6	TP	01 NDX-	TXF	TX	OP3	OP1 .	11 *F19	06 *F19
	1SA TP	T0 PS	TX OE18	B5 1SA	B3 1E18	OTF	C3	OP3	OP1 .	11 *F19	06 *F19
	.	01 NDX-	TXF	TX	.	03 TRS	B6-	OP3	OP1 .	11 *F19	06 *F19
140	1SA OP2	T0 06	TX TP	B5 PS	B3 OE18	B2	B1	OP3	OP1 .	11 *F19	06 *F19
	*F21	OP2	.	01 NDX-	TXF	1SA	1E18	OP3	OP1 .	11 *F19	06 *F19
	BL4	B3	TX TP	B5	B3	B2	B1	OP3	OP1 .	11 *F19	06 *F19
	1SA OP1	T0 06	TX TP	B5 PS	B3 OE18	1SA	1E18	OP3	OP1 .	11 *F19	06 *F19
	*F21	OP1	.	01 NDX-	TXF	TX	.	OP3	OP1 .	11 *F19	06 *F19
	BL4	B3	TX TP	B5	B3	B2	B1	OP3	OP1 .	11 *F19	06 *F19
	1SA OP1	T0 06	TX TP	B5 PS	B3 OE18	1SA	1E18	OP3	OP1 .	11 *F19	06 *F19
	06	TP	TX TP	B6 PS	B3 OE18	03 TRS	B6-	OP3	OP1 .	11 *F19	06 *F19
	.	01 NDX-	TXF	TX	.	03 TRS	B6-	OP3	OP1 .	11 *F19	06 *F19
141	1SA OP3	T0 06	TX TP	B5 E2	B2 PS	B1 OE18	C3	OP3	OP1 .	11 *F19	06 *F19
	12 BL0	PS	TX OE18	B5 1SA	B3 1E18	OTF	C3	OP3	OP1 .	11 *F19	06 *F19
	TP	PS	B6-	TP	B3	B1	C3	OP3	OP1 .	11 *F19	06 *F19
	1SA OE18	T0 PS	TX 1E18	B5 OTF	B3 C3	B1	C3	OP3	OP1 .	11 *F19	06 *F19
	B6-	TP	BL3	B1	B3	B1	C3	OP3	OP1 .	11 *F19	06 *F19
	1SA TP	T0 PS	TX OE18	B5 1SA	B3 1E18	OTF	C3	OP3	OP1 .	11 *F19	06 *F19
	TP	PS	B6-	TP	B3	B1	C3	OP3	OP1 .	11 *F19	06 *F19
	1SA OE18	T0 PS	TX 1E18	B5 OTF	B3 C3	B1	C3	OP3	OP1 .	11 *F19	06 *F19
	B6-	TP	BL3	B1	B3	B1	C3	OP3	OP1 .	11 *F19	06 *F19
	1SA OE18	T0 PS	TX 1E18	B5 OTF	B3 C3	B1	C3	OP3	OP1 .	11 *F19	06 *F19
	B6-	TP	BL3	B1	B3	B1	C3	OP3	OP1 .	11 *F19	06 *F19

142

1SA	TP	06	03
BLO			
1SA		D3	OTF
ND		B6-	TP
C3			05
1SA			
PS			
TRS			
1SA			
PS			
TRS			
1SA			
*F7			

143

1SA	TP	06	03
OP3			
1SA			
06			
D5			
B3-			
1SA			
TP			
E2			
B3-			
1SA			
TP			
TXF			
1SA			
OP3			

144

1SA	TP	06	03
OP6			
NDX-			
1SA			
OE18			
TX			
1SA			
OE18			
B6-			
1SA			
1SA			
TP			

Tape stops
Marker number

CH	145	ISA E1 TXF	T0 OE18 B2-	C3 ISA	E 1E18	K OTF	ND C3	05 .	04 17 OX	03 .	01 NDX-	02 .
	146	C3 or test, zero side. Logic for zero side C3 is on board 227.										
		OSA 1SA OSA OSA 1SA	TX B2 C5 1E18 TX	C3 C3 CR3 C3 OTF 06	OE18 ND E C3 TP	OSA OE18 K 02 OE18	1E18 OSA 05 OSA	OTF 1E18 04 1E18	C3 OTF 03	C3 02 C3	01 OE18 .	01 02
CH	147	C3 and test, zero side.										
		1SA .	B2 CR3- CR3 1E18 E C3 TX 1TF	ND C5 1TF K C3 B2 C3	06 02 OX E C3 05 02 OX CR3 .	TP TX K 01 04 C5 02 C5	OE18 05 NDX- 03 ND	OSA 04 02 06 01 NDX-	1E18 03 OE18 TP TXF	1TF 02 OSA OE18 TX	C3 OE18 1E18 OSA	.

NIXIE INDICATOR TESTS

The following group of tests causes each cathode of each nixie tube to be lighted at some time. There are 18 nixie tubes, and each has an associated neon tube. The neon tube with the sign nixie is never supposed to light. Every time the tape reader stops on a CH command, this listing will show how the nixie readout should look.

1. Depress battery A button.
2. Start the tape reader.

CH 148 Logic for nixie tests is on boards 406, 407, 408, 409, 023.
OSA DSP D6 D5 D2

0				3 2 1
---	--	--	--	-------

Start the tape reader.

CH 149 OSA DSP X1 D6 D5 D2 DA5

0	0	0	3 2	1 0
---	---	---	-----	-----

Start the tape reader.

CH 150

	DSP	X2	D6	D5
0SA	<div style="border: 1px solid black; padding: 2px;">3</div>	<div style="border: 1px solid black; padding: 2px;">210</div>	<div style="border: 1px solid black; width: 80px; height: 30px;"></div>	<div style="border: 1px solid black; width: 80px; height: 30px;"></div>

210 3

Start the tape reader.

CH 151

OSA	X1	X2	DSP	D6
A	3210			

A **3210**

1. Depress battery B button.
2. Start the tape reader.

CH 152

05A	DSP	D7	D2	D1
0000				
0001				
0002				
0003				
0004				
0005				
0006				
0007				
0008				
0009				
0010				
0011				
0012				
0013				
0014				
0015				
0016				
0017				
0018				
0019				
0020				
0021				
0022				
0023				
0024				
0025				
0026				
0027				
0028				
0029				
0030				
0031				
0032				
0033				
0034				
0035				
0036				
0037				
0038				
0039				
0040				
0041				
0042				
0043				
0044				
0045				
0046				
0047				
0048				
0049				
0050				
0051				
0052				
0053				
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0061				
0062				
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0086				
0087				
0088				
0089				
0090				
0091				
0092				
0093				
0094				
0095				
0096				
0097				
0098				
0099				
0100				
0101				
0102				
0103				
0104				
0105				
0106				
0107				
0108				

432

Start the tape reader.

CH 153

OSA	DSP	D7	D2	D1
0000		43	21	

21 43

Start the tape reader.

CH 154

05A	DSP	D7	D2	D1
0000	4	3 2 1		

[illegible]

Start the tape reader.

CH 155

OSA	DSP	D7	D2	D1
8	4 3 2 1			

B			4321		
---	--	--	------	--	--

1. Depress battery C button.
2. Start the tape reader.

CH 156

OSA	DSP	D7	D5	D3
000	000	000	000	000
001	000	000	000	000
002	000	000	000	000
003	000	000	000	000
004	000	000	000	000
005	000	000	000	000
006	000	000	000	000
007	000	000	000	000
008	000	000	000	000
009	000	000	000	000
010	000	000	000	000
011	000	000	000	000
012	000	000	000	000
013	000	000	000	000
014	000	000	000	000
015	000	000	000	000
016	000	000	000	000
017	000	000	000	000
018	000	000	000	000
019	000	000	000	000
020	000	000	000	000
021	000	000	000	000
022	000	000	000	000
023	000	000	000	000
024	000	000	000	000
025	000	000	000	000
026	000	000	000	000
027	000	000	000	000
028	000	000	000	000
029	000	000	000	000
030	000	000	000	000
031	000	000	000	000
032	000	000	000	000
033	000	000	000	000
034	000	000	000	000
035	000	000	000	000
036	000	000	000	000
037	000	000	000	000
038	000	000	000	000
039	000	000	000	000
040	000	000	000	000
041	000	000	000	000
042	000	000	000	000
043	000	000	000	000
044	000	000	000	000
045	000	000	000	000
046	000	000	000	000
047	000	000	000	000
048	000	000	000	000
049	000	000	000	000
050	000	000	000	000
051	000	000	000	000
052	000	000	000	000
053	000	000	000	000
054	000	000	000	000
055	000	000	000	000
056	000	000	000	000
057	000	000	000	000
058	000	000	000	000
059	000	000	000	000
060	000	000	000	000
061	000	000	000	000
062	000	000	000	000
063	000	000	000	000
064	000	000	000	000
065	000	000	000	000
066	000	000	000	000
067	000	000	000	000
068	000	000	000	000
069	000	000	000	000
070	000	000	000	000
071	000	000	000	000
072	000	000	000	000
073	000	000	000	000
074	000	000	000	000
075	000	000	000	000
076	000	000	000	000
077	000	000	00	

5 4 3

Tape stops Marker number

Start the tape reader.

CH	157	OSA	DSP	D7	D5	D3	DA5	DA6	DA2	X1	.
		□□□	□□□	□	5 4	□	□	□	□		
						3 2					

Start the tape reader.

CH	158	OSA	DSP	D7	D5	D3	DA5	DA6	DA2	X2	.
		□□□	□□□	5	4 3 2	□	□	□	□		

Start the tape reader.

CH	159	OSA	DSP	D7	D5	D3	DA5	DA6	DA2	X2	X1
		□□□	5 4 3 2	□	□	□	□	□	□		

1. Depress battery D button.
2. Start the tape reader.

CH	160	OSA	DSP	D7	D6	D3	DA7	D1	DA2	DA1	.
		□□□	3	□	□	□	□	□	□		
						6 5 4					

Start the tape reader.

CH	161	OSA	DSP	D7	D6	D3	DA7	D1	DA2	DA1	X1
		□□□	□	□	□	□	□	□	□		
					6 5	4 3					

Start the tape reader.

CH	162	OSA	DSP	D7	D6	D3	DA7	D1	DA2	DA1	X2
		□□□	□	□	□	□	□	□	□		
					6	5 4 3					

Start the tape reader.

CH	163	OSA	DSP	D7	D6	D3	DA7	D1	DA2	DA1	X2
		X1	.	.	.	.	.	.	.	.	.
		□□□	6 5 4 3	□	□	□					

1. Depress battery E button.
2. Start the tape reader.

CH	164	OSA	DSP	D7	D6	D5	D3	D2	DA7	DA5	DA3
		004				7 6 5					

Start the tape reader.

CH	165	OSA X1	DSP	D7	D6	D5	D3	D2	DA7	DA5	DA3
		000			7 6	5 4					

Start the tape reader.

CH	166	OSA X2	DSP	D7	D6	D5	D3	D2	DA7	DA5	DA3
		000		7	6 5 4						

Start the tape reader.

CH	167	OSA X2	DSP X1	D7	D6	D5	D3	D2	DA7	DA5	DA3
		E00	7 6 5 4								

Start the tape reader.

CH	168	OSA	D8	D3	D2	D1	DA7	DA6	DA3	DA1	DSP
		005				8 7 6					

Start the tape reader.

CH	169	OSA X1	DSP	D8	D3	D2	D1	DA7	DA6	DA3	DA1
		000			8 7	6 5					

Start the tape reader.

CH	170	OSA X2	DSP	D8	D3	D2	D1	DA7	DA6	DA3	DA1
		000		8	7 6 5						

Tape
stops
Marker
number

Start the tape reader.

CH	184	OSA	DSP	D8	D7	D4	D2	D1	DA8	DA6	DA4
		DA1	.	.	.	.	.	.	.	.	.
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>					
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>					

Start the tape reader.

CH	185	OSA	DSP	D8	D7	D4	D2	D1	DA8	DA6	DA4
		DA1	X1	.	.	.	.	.	.	.	.
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>					
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>					

Start the tape reader.

CH	186	ISA	DSH	PS	D6	D5	D3	DA7	DA5	DA3	DA2
		X1	XD	.	.	.	.	.	.	.	.
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>					
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>					

Start the tape reader.

CH	187	ISA	DSH	PS	D6	D5	D3	DA7	DA5	DA3	DA2
		XD	.	.	.	.	.	.	.	.	.
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>					
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>					

Start the tape reader.

CH	188	ISA	DSH	PS	X2	X1	D6	D2	D1	DA7	DA3	DA1	X2
		DA1	XD	.	.	.	.	.	.	.	.	.	.
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>							
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>							

Start the tape reader.

CH	189	ISA	DSH	PS	D6	D2	D1	DA7	DA3	DA1	X2
		XD	.	.	.	.	.	.	.	.	.
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>					
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>					

Start the tape reader.

CH	190	ISA	DSH	PS	D6	D2	D1	DA7	DA3	DA1	X1
		XD	.	.	.	.	.	.	.	.	.

Start the tape reader.

CH	191	ISA	DSH	PS	D6	D2	D1	DA7	DA3	DA1	XD
		E	.	.	.	.	.	.	.	.	.

Start the tape reader.

CH	192	ISA	DSH	PS	X2	X1	D5	D2	DA6	DA5	DA3
		XD	.	.	.	.	.	.	.	.	.

Start the tape reader.

CH	193	ISA	DSH	PS	X2	D5	D2	DA6	DA5	DA3	XD

Start the tape reader.

CH	194	ISA	DSH	PS	X1	D5	D2	DA6	DA5	DA3	XD

Start the tape reader.

CH	195	ISA	DSH	PS	D5	D2	DA6	DA5	DA3	XD	.
		E	.	.	.	.	.	.	.	.	.

Start the tape reader.

CH	196	ISA	DSH	PS	X2	X1	D1	DA6	DA2	DA1	XD

Tape stops Marker number

Start the tape reader.

CH	197	1SA	DSH	PS	X2	D1	DA6	DA2	DA1	XD	.
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>					

Start the tape reader.

CH	198	1SA	DSH	PS	X1	D1	DA6	DA2	DA1	XD	.
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>					

Start the tape reader.

CH	199	1SA	DSH	PS	D1	DA6	DA2	DA1	XD	.	
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>					

Start the tape reader.

CH	200	OSA	DSP	D4	D3	D2	D1	DA8	DA7	DA6	DA4
		DA3	DA1	.	.	.	.	.	.	.	.
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>					

Start the tape reader.

CH	201	1SA	DSH	PS	X2	D8	D7	D6	D5	DA5	DA2
		XD	.	.	.	.	.	.	.	.	.
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>					

Start the tape reader.

CH	202	1SA	DSH	PS	X1	D8	D7	D6	D5	DA5	DA2
		XD	.	.	.	.	.	.	.	.	.
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>					

Start the tape reader.

CH	203	1SA	DSH	PS	D8	D7	D6	D5	DA5	DA2	XD
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>					

Start the tape reader.

CH	204	OSA	DSP	D5	DA8	DA7	DA6	DA5	DA4	DA3	DA2
		000	000	000	000	10					

Start the tape reader.

CH	205	OSA	DSP	X1	D5	DA8	DA7	DA6	DA5	DA4	DA3
		DA2	.	.	.	.	.	.	.	.	.
		000	000	000	10						

Start the tape reader.

CH	206	OSA	DSP	X2	D5	DA8	DA7	DA6	DA5	DA4	DA3
		DA2	.	.	.	.	.	.	.	.	.
		000	000	10							

Start the tape reader.

CH	207	ISA	DSH	PS	D8	D7	D6	D4	D3	D2	D1
		DA1	XD	.	.	.	.	.	.	.	.
		E00	10								

Start the tape reader.

CH	208	OSA	DSP	D6	D1	DA4	DA3	DA2	DA1	.	.
		000	000	000	000	210					

Start the tape reader.

CH	209	OSA	DSP	X1	D6	D1	DA4	DA3	DA2	DA1	.
		000	000	000	210	0					

Start the tape reader.

CH	210	OSA	DSP	X2	D6	D1	DA4	DA3	DA2	DA1	.
		000	000	210							

Tape stops
Marker number

CH 211 OSA DSP X2 X1 D6 D1 DA4 DA3 DA2 DA1

2	1	0	
---	---	---	--

Start the tape reader.

CH 212 OSA D7 D5 D3 DA6 DA5 DA2 . . .

- Nothing should be lit in the nixie display.
If the display reads:

2			5	4	3
---	--	--	---	---	---

The and diode from flip-flop DSP may be open or missing.

- Start the tape reader.

CH 213 OSA DSP DSH D7 D5 D3 DA6 DA5 DA2 .

- Nothing in the nixie display should be lit.
If the display reads:

2			5	4	3
---	--	--	---	---	---

The diode from DSH- may be open.

- Start the tape reader.

CH 214 OSA DSP PS D7 D5 D3 DA6 DA5 DA2 .

- No part of the nixie display should be lit.
If the display reads:

2			5	4	3
---	--	--	---	---	---

The diode from *WI may be open.

- The following tests check the setup buttons.
- Depress the PROG TEST button.
- Start the tape reader.

CH	216	Logic for set-up buttons is on boards 401, 402, 403, 001. Logic for button switch is to replace button switch.	OSA T0	D	E1 1E18	OB2 1TF	TS0 IC	OE18 D	BSC OTF	IC OB2	D OB5
			OB2	OB5	.	.	.	.	.	.	.
			OB6	.	.	.	.	.	.	.	.
		1. Depress the SET UP button.									
		2. Start the tape reader.									
CH	217	Logic for set-up buttons is on boards 401, 402, 403, 002. Logic for button switch is to replace button switch.	OSA T0	D	E1 1E18	OB2 1TF	TS0 IC	OE18 D	BSC OB2	IC OB5	D OTF
			OB2	OB5	.	.	.	.	.	.	.
			OB6	.	.	.	.	.	.	.	.
		1. Depress the SEND button.									
		2. Start the tape reader.									
CH	218	Logic for set-up buttons is on boards 401, 402, 403, 004. Logic for button switch is to replace button switch.	OSA T0	D	E1 1E18	OB2 1TF	TS0 IC	OE18 D	BSC OB2	IC OB6	D OTF
			OB2	OB5	.	.	.	.	.	.	.
			OB5	.	.	.	.	.	.	.	.
		1. Depress the COMPUTE button.									
		2. Start the tape reader.									
CH	219	Logic for set-up buttons is on boards 401, 402, 403, 005. Logic for button switch is to replace button switch.	OSA T0	D	E1 1E18	OB2 1TF	TS0 IC	OE18 D	BSC OB6	IC OTF	D OB2
			OB2	OB5	.	.	.	.	.	.	.
			OB5	.	.	.	.	.	.	.	.
		1. Depress the TRIG button.									
		2. Start the tape reader.									
CH	220	Logic for set-up buttons is on boards 401, 402, 403, 006. Logic for button switch is to replace button switch.	OSA T0	D	E1 1E18	OB2 1TF	TS0 IC	OE18 D	BSC OB2	IC OB5	D OB6
			OB2	OB5	.	.	.	.	.	.	.
		
		1. Depress the RECEIVE button.									
		2. Start the tape reader.									

Tape
stops
Marker
number

CH 221

Logic for set-up buttons is on boards 401, 402, 403, 007. Logic for button switch is to replace button switch.

OSA	TO	D	E1	OB2	TSO	OE18	BSC	IC	D
OB2	OB5	OB6	1E18	1TF	IC	D	OB5	OB6	OTF
OB2	.	.	.	.	.	.	.	.	.

1. Depress the SM key.
2. Start the tape reader.

CH 222

Logic for set-up buttons is on boards, 401, 402, 403, 021. Logic for button switch is to replace button switch.

OSA	TO	D	E1	OB2	TSO	OE18	BSC	IC	D
OB2	OB5	OB6	1E18	1TF	IC	D	OB2	OTF	OB5
OB6	.	.	.	.	.	.	.	.	.

1. Depress the RECALL button.
2. Start the tape reader.

CH 223

Logic for set-up buttons is on boards 401, 402, 403, 003. Logic for button switch is to replace button switch.

OSA	TO	D	E1	OB2	TSO	OE18	BSC	IC	D
OB2	OB5	OB6	1E18	1TF	IC	D	OB5	OTF	OB2
OB6	.	.	.	.	.	.	.	.	.

1. Depress the RESET button.
2. Start the tape reader.

CH 224

Logic for set-up buttons is on boards 401, 402, 403, 406, 008. Logic for button switch is to replace button switch.

OSA	D	PE	OFL0	E	OE18	BSC	PE	OFL0	OTF
PE	OFL0	.	.	OSA	PE	E	OE18	BSC	D
1E18	1TF	D	.	.	OSA	OFL0	E	OE18	BSC
D	1E18	1TF	D	.	.	.	.	.	.

1. This test checks the OFF position of the SET UP and RESET buttons.
2. Start the tape reader.

CH 225

Logic for set-up buttons is on boards 401, 402, 403, 406, 002, 008. Logic for button switch is to replace button switch.

OSA	D	E1	TSO	OP3	OP1	OB2	OE18	BSC	IC
D	OB2	OB5	OB6	1E18	1TF	OB2	OTF	IC	D
OB5	OB6	.	.	OSA	D	PE	OFL0	E	OE18
BSC	PE	OFL0	1E18	1TF	PE	OFL0	.	.	OSA
PE	OFL0	E	OE18	BSC	D	1E18	OTF	D	.

Place the MARGINAL TEST switch in the ON position. The POWER READY lamp must be flashing.

Place the MARGINAL TEST switch in the OFF position. The POWER READY lamp must be lit and must not be flashing.

The following tests check the PARITY, ERROR, NO SOLUTION, COMPUTE, IN/OUT, and KEYBOARD lamps.

Start the tape reader.

CH 226 Logic for terms is on boards 401, 402, 403, 404, 405. Logic for neon lamps is to replace neon 014, 016, 018, 019, 020.
OSA

If there are no errors:

1. The IN/OUT lamp must be lit.
2. The COMPUTE and KEYBOARD lamps must not be lit.
3. The PARITY, ERROR, and NO SOLUTION lamps must be lit and not flashing.
4. Start the tape reader.

CH 227 Logic for terms is on boards 401, 402, 403, 404, 405. Logic for neon lamps is to replace neon 020.
OSA 04 0B6 0B5 AK

If there are no errors:

1. The IN/OUT and KEYBOARD lamps must be lit.
2. The COMPUTE lamp must not be lit.
3. The PARITY, ERROR, and NO SOLUTION lamps must be lit and not flashing.
4. Start the tape reader.

CH 228 Logic for terms is on boards 401, 402, 403, 404, 405. Logic for neon lamps is to replace neon 016, 019.
OSA OP3 OP2 K AK 04 0B6 0B5

If there are no errors:

1. The COMPUTE lamp must be lit.
2. The IN/OUT and KEYBOARD lamps must not be lit.
3. The PARITY, ERROR, and NO SOLUTION lamps must be lit and not flashing.
4. Start the tape reader.

CH 233

Logic for terms is on boards 401, 402, 403, 404, 405.
OSA AK OB6 OB5

If there are no errors:

1. The KEYBOARD lamp must not be lit.
2. Start the tape reader.

CH 234

Logic for terms is on boards 401, 402, 403, 404, 405.
OSA PS AK O4 OB6 OB5

If there are no errors:

1. The KEYBOARD lamp must not be lit.
2. Start the tape reader.

CH 235

Logic for terms is on boards 401, 402, 403, 404, 405.
OSA AK O4 OB5

If there are no errors:

1. The KEYBOARD lamp must not be lit.
2. Start the tape reader.

CH 236

Logic for terms is on boards 401, 402, 403, 404, 405.
OSA AK O4 OB6

If there are no errors: The KEYBOARD indicator must not be lit.

The following tests check the operation of the FADAC keyboard. After starting the tape reader depress the 0 keyboard key.

Start the tape reader.

CH 237

[illegible]

238

[illegible]

1. After starting the tape reader, depress keyboard key 2.
2. Start the tape reader.

Logic for terms is to replace keyboard 010.

[illegible]

247

[illegible]

1. After starting the tape reader, depress keyboard key 4.
2. Start the tape reader.

242

Logic for terms is to replace keyboard 010.

[illegible]

243 --Cont

[illegible]

1. After starting the tape reader, depress keyboard key 7.
2. Start the tape reader.

[illegible]

[illegible]

CH 246

Logic for terms is to replace keyboard 010.

[illegible]

--Cont

[illegible]

1. After starting the tape reader, depress keyboard key -.
2. Start the tape reader.

CH 247

Logic for terms is to replace keyboard 010.

[illegible]

248

[illegible]

1. After starting the tape reader, depress keyboard key CLEAR.
2. Start the tape reader.

251

[illegible]

- 252

[illegible]

256

257

258

[illegible]

MSU0	MSU1	MSU2	MSU3	MSU4	MSU5	MSU6
MSU5	MSU4	MSU5	MSU3	MSU4	MSU5	MSU6
1SA	MSW	MSW	MSW	MSW	MSW	MSW
OSA	MSW	MSW	MSW	MSW	MSW	MSW
1SA	MSW	MSW	MSW	MSW	MSW	MSW
OSA	MSW	MSW	MSW	MSW	MSW	MSW
1SA	MSW	MSW	MSW	MSW	MSW	MSW

259 Logic for terms is on boards 434, 437, 438. Check memory plugs P3, P4, P7, P8.

OSA	MSW	MSW	MSW	MSW	MSW	MSW
1SA	MSW	MSW	MSW	MSW	MSW	MSW
OSA	MSW	MSW	MSW	MSW	MSW	MSW
1SA	MSW	MSW	MSW	MSW	MSW	MSW
OSA	MSW	MSW	MSW	MSW	MSW	MSW
1SA	MSW	MSW	MSW	MSW	MSW	MSW

260 Logic for terms is on boards 434, 437, 438. Check memory plugs P3, P4, P7, P8.

OSA	MSW	MSW	MSW	MSW	MSW	MSW
1SA	MSW	MSW	MSW	MSW	MSW	MSW
OSA	MSW	MSW	MSW	MSW	MSW	MSW
1SA	MSW	MSW	MSW	MSW	MSW	MSW
OSA	MSW	MSW	MSW	MSW	MSW	MSW
1SA	MSW	MSW	MSW	MSW	MSW	MSW

261

Logic for terms for indexes 001-100 is on boards 434, 438, 439.
Logic for terms for indexes 101-150 is on boards 433, 436, 437.
Check memory plugs P3, P4, P7, P8.

[illegible]

262

Logic for terms is on boards 433, 436, 437. Check memory plugs P3, P4, P7, P8.

OS	OSA	MSU1	C6	C3	1TA	SS5	PS	03	1TA	SS5	04	SS5	03
1SA	1SA	MWO	C7	C5	C4	C2	C2						
OSA	OSA	MW1	C6	C5	C3	1TA	SS5						
1SA	1SA	MWO	C7	C4	C2	C2	SS5						
OSA	OSA	MW1	C6	C5	C3	1TA	SS5						
1SA	1SA	MWO	C7	C4	C2	C2	SS5						
OSA	OSA	MW1	C6	C3	1TA	SS5	PS						
1SA	1SA	MWO	C7	C5	C4	C2	SS5						
OSA	OSA	MW1	C6	C3	1TA	SS5	PS						
1SA	1SA	MWO	C7	C5	C4	C2	SS5						
OSA	OSA	MW1	C6	C3	1TA	SS5	PS						
1SA	1SA	MWO	C7	C5	C4	C2	SS5						
OSA	OSA	MW1	C6	C3	1TA	SS5	PS						
1SA	1SA	MWO	C7	C5	C4	C2	SS5						
OSA	OSA	MW1	C6	C3	1TA	SS5	PS						
1SA	1SA	MWO	C7	C5	C4	C2	SS5						
OSA	OSA	MW1	C6	C3	1TA	SS5	PS						
1SA	1SA	MWO	C7	C5	C4	C2	SS5						
OSA	OSA	MW1	C6	C3	1TA	SS5	PS						
1SA	1SA	MWO	C7	C5	C4	C2	SS5						
OSA	OSA	MW1	C6	C3	1TA	SS5	PS						
1SA	1SA	MWO	C7	C5	C4	C2	SS5						
OSA	OSA	MW1	C6	C3	1TA	SS5	PS						
1SA	1SA	MWO	C7	C5	C4	C2	SS5						
OSA	OSA	MW1	C6	C3	1TA	SS5	PS						
1SA	1SA	MWO	C7	C5	C4	C2	SS5						
OSA	OSA	MW1	C6	C3	1TA	SS5	PS						
1SA	1SA	MWO	C7	C5	C4	C2	SS5						
OSA	OSA	MW1	C6	C3	1TA	SS5	PS						
1SA	1SA	MWO	C7	C5	C4	C2	SS5						
OSA	OSA	MW1	C6	C3	1TA	SS5	PS						
1SA	1SA	MWO	C7	C5	C4	C2	SS5						
OSA	OSA	MW1	C6	C3	1TA	SS5	PS						
1SA	1SA	MWO	C7	C5	C4	C2	SS5						
OSA	OSA	MW1	C6	C3	1TA	SS5	PS						
1SA	1SA	MWO	C7	C5	C4	C2	SS5						
OSA	OSA	MW1	C6	C3	1TA	SS5	PS						
1SA	1SA	MWO	C7	C5	C4	C2	SS5						
OSA	OSA	MW1	C6	C3	1TA	SS5	PS						
1SA	1SA	MWO	C7	C5	C4	C2	SS5						
OSA	OSA	MW1	C6	C3	1TA	SS5	PS						
1SA	1SA	MWO	C7	C5	C4	C2	SS5						
OSA	OSA	MW1	C6	C3	1TA	SS5	PS						
1SA	1SA	MWO	C7	C5	C4	C2	SS5						
OSA	OSA	MW1	C6	C3	1TA	SS5	PS						
1SA	1SA	MWO	C7	C5	C4	C2	SS5						
OSA	OSA	MW1	C6	C3	1TA	SS5	PS						
1SA	1SA	MWO	C7	C5	C4	C2	SS5						
OSA	OSA	MW1	C6	C3	1TA	SS5	PS						
1SA	1SA	MWO	C7	C5	C4	C2	SS5						
OSA	OSA												

263

Logic for terms is on boards 433, 436, 437, 439. Check memory plugs P3, P4, P7, P8.

[illegible]

OSA	MWO	C5	TTA	SS6	02	SS6	02
1SA	MWT	C7	C4	C2	PS	TTA	02
OSA	MWO	C6	TTA	SS6	03	SS6	03
1SA	MWT	C7	C4	C2	PS	TTA	04
OSA	MWO	C5	C3	TTA	SS6	SS6	04
1SA	MWT	C6	C2	PS	TTA	SS6	05
OSA	MWO	C7	TTA	SS6	05	SS6	05
1SA	MWT	CFSW	C5	C4	C2	PS	SS6
OSA	MWO	C7	C3	TTA	SS6	06	06
1SA	MWT	C5	C3	TTA	SS6	06	06

264

Logic for terms is on boards 433, 436, 437, 439, 435. Check memory plugs P3, P4, P7, P8.

1SA	MWT	CFSW	C6	C2	PS	TTA	SS6	06
OSA	MWO	CFSW	C7	TTA	SS6	07	SS6	07
1SA	MWT	C6	C5	C2	PS	TTA	SS6	08
OSA	MWO	CFSW	C7	C3	TTA	SS6	SS6	08
1SA	MWT	C6	C2	PS	TTA	SS6	01	
OSA	MWO	C7	C4	PS	TTA	SS6	01	
1SA	MWT	C5	C4	PS	TTA	SS6	06	
OSA	MWO	CFSW	C5	04	MSU3	05	MSU4	
1SA	MWT	C3	C3	03	MSU2	05	MSU5	
OSA	MWO	C6	C2	08	MSS5	08	MSL2	
1SA	MWT	C7	C2	C6	C3	01	SS7	
OSA	MWO	C6	C5	C6	TTA	02	SS7	
1SA	MWT	C5	C2	C3	TTA	02	SS7	
OSA	MWO	C7	C4	PS	TTA	02	SS7	

265

Logic for terms is on boards 433, 435, 437. Check memory plugs P3, P4, P7, P8.

OSA	MWT	C6	C2	TTA	SS7	03	SS7	03
1SA	MWO	C7	C4	PS	TTA	SS7	SS7	03
OSA	MWT	C6	C3	C2	TTA	SS7	SS7	04
1SA	MWO	C7	C4	PS	TTA	SS7	SS7	04
OSA	MWT	C7	C2	TTA	SS7	05	SS7	05
1SA	MWO	CFSW	C5	C4	PS	TTA	SS7	05
OSA	MWT	C7	C3	C2	TTA	SS7	SS7	06
1SA	MWO	C6	C5	C3	TTA	SS7	SS7	06
OSA	MWT	CFSW	C6	C4	PS	TTA	SS7	07
1SA	MWO	C7	C4	PS	TTA	SS7	SS7	07
OSA	MWT	C6	C5	C3	TTA	SS7	SS7	08
1SA	MWO	CFSW	C7	C4	PS	TTA	SS7	08
OSA	MWT	C6	C5	C3	TTA	SS7	SS7	02
1SA	MWO	C7	C4	PS	TTA	SS7	SS7	02
OSA	MWT	C5	C4	PS	TTA	SS7	SS7	07
1SA	MWO	CFSW	C5	04	MSU3	05	MSU4	
OSA	MWT	C6	C2	03	MSU2	05	MSU5	
1SA	MWO	C7	C4	08	MSS5	06	MSU5	

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267

268

Logic for terms is on boards 433, 434, 437.										Check memory plugs P3, P4, P7, P8.										
OSA	MW1	C6	C4	1TA	SS9	PS	03	1TA	SS9	03	SS9	04	SS9	03						
1SA	MW0	C7	C5	C3	C2	1TA	SS9	SS9	04	SS9	04	SS9	03							
OSA	MW1	C6	C5	C4	PS	SS9	SS9	SS9	04	SS9	04	SS9	03							
1SA	MW0	C7	C3	C2	PS	SS9	SS9	SS9	04	SS9	04	SS9	03							
OSA	MW1	C7	C4	1TA	SS9	SS9	05	SS9	SS9	05	SS9	04	SS9	03						
1SA	MW0	CFSW	C6	C5	C3	C2	PS	SS9	SS9	05	SS9	04	SS9	03						
	05																			
OSA	MW1	C7	C5	C4	1TA	SS9	SS9	SS9	06	SS9	06	SS9	03							
1SA	MW0	CFSW	C6	C3	C2	PS	SS9	SS9	06	SS9	06	SS9	03							
OSA	MW1	CFSW	C7	C4	1TA	SS9	SS9	SS9	07	SS9	07	SS9	03							
1SA	MW0	C6	C5	C3	C2	PS	SS9	SS9	07	SS9	07	SS9	03							
OSA	MW1	CFSW	C7	C5	C4	1TA	SS9	SS9	08	SS9	08	SS9	03							
1SA	MW0	C6	C3	C2	PS	SS9	SS9	SS9	08	SS9	08	SS9	03							

1SA	MW0	C5	C3	C2	PS	OTA	SS9	01	MSU0
.	02 MSU1	.	03 MSU2	.	04 MSU3	.	05 MSU4	.	06 MSU5
1SA	MSS4	.	08 MSS5	.	C2	OTA	SS9	.	08 MSL4
C432	MW1	MW0	C6	C4	C2	OTA	SS9	.	08 MSL4
1SA	MW1	MW0	C6	C3	PS	OTA	SS9	.	08 MSL4
C2-

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Logic for terms is on boards 433, 434, 439. Check memory plugs P3, P4, P7, P8.

OSA	MW0	C4	1TA	SS10	01	PS	1TA	SS10
1SA	MW1	C7	C6	C5	C3	C2	PS	SS10
OSA	MW0	C5	C4	1TA	SS10	.	02	.
1SA	MW1	C7	C6	C3	C2	PS	1TA	SS10
OSA	MW0	C6	C4	1TA	SS10	.	03	.
1SA	MW1	C7	C5	C3	C2	PS	1TA	SS10
OSA	MW0	C6	C5	C4	1TA	SS10	04	04
1SA	MW1	C7	C3	C2	PS	1TA	SS10	.
OSA	MW0	C7	C4	1TA	SS10	PS	SS10	04
1SA	MW1	CFSW	C6	C5	C3	C2	PS	SS10
OSA	MW0	C7	C5	C4	1TA	SS10	06	.
1SA	MW1	CFSW	C6	C3	C2	PS	1TA	SS10
OSA	MW0	CFSW	C7	C4	1TA	SS10	07	.

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Logic for terms is on boards 433, 434, 437, 439. Check memory plugs P3, P4, P7, P8.

1SA	MW1	C6	C5	C3	C2	PS	1TA	SS10
OSA	MW0	CFSW	C7	C5	C4	1TA	SS10	08
1SA	MW1	C6	C3	C2	PS	1TA	SS10	08
1SA	MW1	C5	C3	C2	PS	OTA	SS10	01
.	02 MSU1	.	03 MSU2	.	04 MSU3	.	05 MSU4	06 MSU5
.	07 MSS4	.	08 MSS5	.	.	.	.	.
1SA	MW1	MW0	C6	C4	OTA	SS10	08	MSL4
OSA	MW1	C4	C2	1TA	SS11	PS	1TA	SS11
1SA	MW0	C7	C5	C3	1TA	SS11	02	01
OSA	MW1	C5	C4	C2	PS	1TA	SS11	.
1SA	MW0	C7	C6	C3	PS	1TA	SS11	02
OSA	MW1	C6	C4	C2	1TA	SS11	03	03
1SA	MW1	C6	C5	C3	PS	1TA	SS11	.

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Logic for terms is on boards 433, 434, 437. Check memory plugs P3, P4, P7, P8.

Category	Item	Value	Unit	Notes
01	01A	0.00	0.00	0.00
	01B	0.00	0.00	0.00
	01C	0.00	0.00	0.00
	01D	0.00	0.00	0.00
	01E	0.00	0.00	0.00
	01F	0.00	0.00	0.00
	01G	0.00	0.00	0.00
	01H	0.00	0.00	0.00
	01I	0.00	0.00	0.00
	01J	0.00	0.00	0.00
02	02A	0.00	0.00	0.00
	02B	0.00	0.00	0.00
	02C	0.00	0.00	0.00
	02D	0.00	0.00	0.00
	02E	0.00	0.00	0.00
	02F	0.00	0.00	0.00
	02G	0.00	0.00	0.00
	02H	0.00	0.00	0.00
	02I	0.00	0.00	0.00
	02J	0.00	0.00	0.00
03	03A	0.00	0.00	0.00
	03B	0.00	0.00	0.00
	03C	0.00	0.00	0.00
	03D	0.00	0.00	0.00
	03E	0.00	0.00	0.00
	03F	0.00	0.00	0.00
	03G	0.00	0.00	0.00
	03H	0.00	0.00	0.00
	03I	0.00	0.00	0.00
	03J	0.00	0.00	0.00
04	04A	0.00	0.00	0.00
	04B	0.00	0.00	0.00
	04C	0.00	0.00	0.00
	04D	0.00	0.00	0.00
	04E	0.00	0.00	0.00
	04F	0.00	0.00	0.00
	04G	0.00	0.00	0.00
	04H	0.00	0.00	0.00
	04I	0.00	0.00	0.00
	04J	0.00	0.00	0.00
05	05A	0.00	0.00	0.00
	05B	0.00	0.00	0.00
	05C	0.00	0.00	0.00
	05D	0.00	0.00	0.00
	05E	0.00	0.00	0.00
	05F	0.00	0.00	0.00
	05G	0.00	0.00	0.00
	05H	0.00	0.00	0.00
	05I	0.00	0.00	0.00
	05J	0.00	0.00	0.00
06	06A	0.00	0.00	0.00
	06B	0.00	0.00	0.00
	06C	0.00	0.00	0.00
	06D	0.00	0.00	0.00
	06E	0.00	0.00	0.00
	06F	0.00	0.00	0.00
	06G	0.00	0.00	0.00
	06H	0.00	0.00	0.00
	06I	0.00	0.00	0.00
	06J	0.00	0.00	0.00
07	07A	0.00	0.00	0.00
	07B	0.00	0.00	0.00
	07C	0.00	0.00	0.00
	07D	0.00	0.00	0.00
	07E	0.00	0.00	0.00
	07F	0.00	0.00	0.00
	07G	0.00	0.00	0.00
	07H	0.00	0.00	0.00
	07I	0.00	0.00	0.00
	07J	0.00	0.00	0.00
08	08A	0.00	0.00	0.00
	08B	0.00	0.00	0.00
	08C	0.00	0.00	0.00
	08D	0.00	0.00	0.00
	08E	0.00	0.00	0.00
	08F	0.00	0.00	0.00
	08G	0.00	0.00	0.00
	08H	0.00	0.00	0.00
	08I	0.00	0.00	0.00
	08J	0.00	0.00	0.00
09	09A	0.00	0.00	0.00
	09B	0.00	0.00	0.00
	09C	0.00	0.00	0.00
	09D	0.00	0.00	0.00
	09E	0.00	0.00	0.00
	09F	0.00		

Logic for terms is on boards 433, 434, 437, 439.

Check memory plugs P3, P4, P7, P8.

[illegible]

Logic for terms is on boards 433, 437, 439, 439, 434.

Check memory plus p3. p4. p7. p8.

OS	MSU	MSU2	MSU3	MSU4	MSU5	MSU6	MSU7	MSU8	MSU9	MSU10	MSU11	MSU12	MSU13	MSU14	MSU15	MSU16	MSU17	MSU18	MSU19	MSU20	MSU21	MSU22	MSU23	MSU24	MSU25	MSU26	MSU27	MSU28	MSU29	MSU30	MSU31	MSU32	MSU33	MSU34	MSU35	MSU36	MSU37	MSU38	MSU39	MSU40	MSU41	MSU42	MSU43	MSU44	MSU45	MSU46	MSU47	MSU48	MSU49	MSU50	MSU51	MSU52	MSU53	MSU54	MSU55	MSU56	MSU57	MSU58	MSU59	MSU60	MSU61	MSU62	MSU63	MSU64	MSU65	MSU66	MSU67	MSU68	MSU69	MSU70	MSU71	MSU72	MSU73	MSU74	MSU75	MSU76	MSU77	MSU78	MSU79	MSU80	MSU81	MSU82	MSU83	MSU84	MSU85	MSU86	MSU87	MSU88	MSU89	MSU90	MSU91	MSU92	MSU93	MSU94	MSU95	MSU96	MSU97	MSU98	MSU99	MSU100	MSU101	MSU102	MSU103	MSU104	MSU105	MSU106	MSU107	MSU108	MSU109	MSU110	MSU111	MSU112	MSU113	MSU114	MSU115	MSU116	MSU117	MSU118	MSU119	MSU120	MSU121	MSU122	MSU123	MSU124	MSU125	MSU126	MSU127	MSU128	MSU129	MSU130	MSU131	MSU132	MSU133	MSU134	MSU135	MSU136	MSU137	MSU138	MSU139	MSU140	MSU141	MSU142	MSU143	MSU144	MSU145	MSU146	MSU147	MSU148	MSU149	MSU150	MSU151	MSU152	MSU153	MSU154	MSU155	MSU156	MSU157	MSU158	MSU159	MSU160	MSU161	MSU162	MSU163	MSU164	MSU165	MSU166	MSU167	MSU168	MSU169	MSU170	MSU171	MSU172	MSU173	MSU174	MSU175	MSU176	MSU177	MSU178	MSU179	MSU180	MSU181	MSU182	MSU183	MSU184	MSU185	MSU186	MSU187	MSU188	MSU189	MSU190	MSU191	MSU192	MSU193	MSU194	MSU195	MSU196	MSU197	MSU198	MSU199	MSU200	MSU201	MSU202	MSU203	MSU204	MSU205	MSU206	MSU207	MSU208	MSU209	MSU210	MSU211	MSU212	MSU213	MSU214	MSU215	MSU216	MSU217	MSU218	MSU219	MSU220	MSU221	MSU222	MSU223	MSU224	MSU225	MSU226	MSU227	MSU228	MSU229	MSU230	MSU231	MSU232	MSU233	MSU234	MSU235	MSU236	MSU237	MSU238	MSU239	MSU240	MSU241	MSU242	MSU243	MSU244	MSU245	MSU246	MSU247	MSU248	MSU249	MSU250	MSU251	MSU252	MSU253	MSU254	MSU255	MSU256	MSU257	MSU258	MSU259	MSU260	MSU261	MSU262	MSU263	MSU264	MSU265	MSU266	MSU267	MSU268	MSU269	MSU270	MSU271	MSU272	MSU273	MSU274	MSU275	MSU276	MSU277	MSU278	MSU279	MSU280	MSU281	MSU282	MSU283	MSU284	MSU285	MSU286	MSU287	MSU288	MSU289	MSU290	MSU291	MSU292	MSU293	MSU294	MSU295	MSU296	MSU297	MSU298	MSU299	MSU300	MSU301	MSU302	MSU303	MSU304	MSU305	MSU306	MSU307	MSU308	MSU309	MSU310	MSU311	MSU312	MSU313	MSU314	MSU315	MSU316	MSU317	MSU318	MSU319	MSU320	MSU321	MSU322	MSU323	MSU324	MSU325	MSU326	MSU327	MSU328	MSU329	MSU330	MSU331	MSU332	MSU333	MSU334	MSU335	MSU336	MSU337	MSU338	MSU339	MSU340	MSU341	MSU342	MSU343	MSU344	MSU345	MSU346	MSU347	MSU348	MSU349	MSU350	MSU351	MSU352	MSU353	MSU354	MSU355	MSU356	MSU357	MSU358	MSU359	MSU360	MSU361	MSU362	MSU363	MSU364	MSU365	MSU366	MSU367	MSU368	MSU369	MSU370	MSU371	MSU372	MSU373	MSU374	MSU375	MSU376	MSU377	MSU378	MSU379	MSU380	MSU381	MSU382	MSU383	MSU384	MSU385	MSU386	MSU387	MSU388	MSU389	MSU390	MSU391	MSU392	MSU393	MSU394	MSU395	MSU396	MSU397	MSU398	MSU399	MSU400	MSU401	MSU402	MSU403	MSU404	MSU405	MSU406	MSU407	MSU408	MSU409	MSU410	MSU411	MSU412	MSU413	MSU414	MSU415	MSU416	MSU417	MSU418	MSU419
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274 Logic for terms is on boards 433, 434, 437. Check memory plugs P3, P4, P7, P8.

OSA	MM1	C6	C5	C4	C3	1TA	SS13	04
1SA	MM0	C7	C2	PS	1TA	SS13	04	
OSA	MM1	C7	C4	C3	1TA	SS13	05	
1SA	MM0	CFSW	C6	C5	C2	PS	SS13	
OSA	MM1	C7	C5	C4	C3	1TA	06	
1SA	MM0	CFSW	C6	C2	PS	1TA	06	
OSA	MM1	CFSW	C7	C4	C3	1TA	07	
1SA	MM0	C6	C5	C2	PS	1TA	08	
OSA	MM1	CFSW	C7	C5	C4	C3	SS13	
1SA	MM0	C6	C2	PS	1TA	SS13	08	
OSA	MM1	C5	PS	08	SS13	01	MSU0	
1SA	MM0	C2	PS	06	SS13	06	MSU5	
MSU1	03	MSU2	04	MSU3	05	MSU4	08	
MSS4	08	MSS5	04	04	05	06	07	
1SA	MM1	MM0	C6	C4	C3	0TA	SS13	
MSL6	C433					0TA	SS13	

275 Logic for terms is on boards 433, 434, 437, 439. Check memory plugs P3, P4, P7, P8.

1SA	MM1	MM0	C6	C3	0TA	SS13	01	C2-
OSA	MM0	C4	C3	SS14	PS	SS14	01	
1SA	MM1	C7	C6	C2	1TA	SS14	02	
OSA	MM0	C5	C4	C3	PS	SS14	02	
1SA	MM1	C7	C6	C2	1TA	SS14	03	
OSA	MM0	C6	C4	C3	PS	SS14	03	
1SA	MM1	C7	C5	C2	1TA	SS14	04	
OSA	MM0	C6	C5	C4	C3	SS14	04	
1SA	MM1	C7	C2	PS	1TA	SS14	05	
OSA	MM0	C7	C4	C3	PS	SS14	05	
1SA	MM1	CFSW	C6	C5	C2	1TA	SS14	
OSA	MM0	C7	C5	C4	C3	SS14	06	
1SA	MM1	CFSW	C6	C2	PS	SS14	06	

276 Logic for terms is on boards 433, 434, 437, 439. Check memory plugs P3, P4, P7, P8.

OSA	MM0	CFSW	C7	C4	C3	1TA	SS14	07
1SA	MM1	C6	C5	C2	PS	1TA	SS14	
OSA	MM0	CFSW	C7	C5	C4	C3	SS14	
1SA	MM1	C6	C2	PS	1TA	SS14	08	
OSA	MM0	C5	C2	PS	SS14	08	02	
1SA	MM1	03	MSU2	04	MSU4	01	MSU1	
MSU1	08	MSU5	04	05	06	06	07	
MSS4	08	MSS5	04	05	06	06	07	
1SA	MM1	MM0	C6	C4	C3	SS14	08	
OSA	MM0	C4	C2	PS	SS14	01	01	
1SA	MM1	C7	C5	C3	SS15	02	02	
OSA	MM0	C5	C4	C3	SS15	02	03	
1SA	MM1	C7	C6	C2	SS15	03	03	
OSA	MM0	C6	C5	C3	SS15	03	03	
1SA	MM1	C7	C4	C2	SS15	03	03	

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[illegible]

Tape stops	Marker number
1	1
2	2
3	3
4	4
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90	90
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92	92
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94	94
95	95
96	96
97	97
98	98
99	99
100	100

284	MW1 or test, one side. Logic for one side MW1 is on boards 334, 437.									
	OSA	C5	C6	E	K	MN	O6	OE18	1SA	
	1E18	TTF	MW1	01						
	1SA	T0	TX	05	03	TP	C4	C3	PS	
	C7	OE18	1SA	1E18	1TF	MW1	01			
	OSA	C2	C5	02	AK	MC		1SA	1E18	
	1TF	MW1								
	1SA	T0	D	K	ND	TP	MW1	C4	C3	
	PS	C7	OE18	1SA	1E18	1TF		02		
	OSA	C2	C5	E	K	06	TP	OE18	1SA	
	1E18	1TF	MW1	03						
	1SA	MW0	03	PN	MW1	C4	C3	PS	C7	
	OE18	1SA	1TF	MW1	MC	TP	OE18	1SA	1E18	
	OSA	C2	C6	AK						
	1TF	MW1	04	ND	PN	MW1	C4	C3	PS	
	1SA	MW0	K	1E18	1TF		04			
	C7	OE18	1SA							
285	MW1 and test, one side.									
	1SA	T0	TX	05	03	PN	TP	MW1	C4	
	C3	PS	C7	1SA	1E18	OTF	MW1		01	MNA
		03								
	1SA	TP	TX	AK	MC	06	TP	MW1	C4	
	C3	T0	PS	OE18	1E18	OTF	MW1		C4	
	1SA	05	03	MW1	C3	PS	C7	OE18	OW	
	1E18	OTF	MW1		03	PN-			1SA	
	1SA	T0	TX	D	MN	ND	PN	TP	MW1	
	C4	C3	PS	01	K	1SA	OTF	MW1		
	MNA	TP	04	OE18						02
	1SA	T0	TX	E	MC	06	TP	MW1	C4	
	C3	PS	C7	1SA	1E18	OTF	MW1		02	KW
	1SA	D	K	MW1	C4	C3	PS	C7	OE18	
	1SA	1E18	OTF	MW1	02	PN-				
	1SA	AK	E	06	PN	MW1	C4	C3	PS	
	C7	OE18	1SA	OTF	MW1		03	OW	KW	
287	MW1 or test, zero side. Logic for zero side MW1 is on boards 333, 334, 437.									
	OSA	C2	C5	MW1	OE18	OSA	1E18	OTF	MW1	
		01								
	1SA	TX	MN	OE18	OSA	1E18	OTF	MW1		01
	OSA	C2	C5	PN	TP	MW1	OE18	OSA	1E18	
	OTF	MW1								
	1SA	TX	OE18	1E18	OTF	MW1				
	OSA	C2	C5	TX	MN	MW1	02			
	OTF	MW1	03	OE18	OTF	MW1	OE18	OSA	1E18	
	1SA	PN		1E18	OTF	MW1				

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Time and case, one stage	TX	Q5	Q3	TP	MW0	C4	C3	PS	C7
1SA	1SA	1E18	OTF	MW0	.	MNA-	.	03 TP	.
0E18	1SA	1E18	OTF	MW0	.	MNA-	.	03 TP	05

TXS	TX	AK	E	MC	MN	TP	MW0	C4
1SA	PS	C7	0E18	1SA	1E18	MW0		01 OW
1SA	TX	MN	05	03	PN	C4	C3	03 PN
1SA	0E18	1SA	1E18	0TF	MW0	01 TXP-		

[illegible]

	TX	AK	E	MC	O6	TP	MW0	C4	C3
1SA	C7	OE18	1SA	1E18	OTF	MW0	.	KW	.
PS	TX	D	K	MN	ND	PN	MW0	C4	C3
1SA	C7	OE18	1SA	1E18	OTF	MW0	.	TXP-	. 04

PN	TXS	MC	MW	C4	C3	PS	C7
06	TXS	MC	MW	C4	C3	PS	C7
AK	E						
1SA	1ET8	0TF	MW	03	0W		
0ET8	1SA						

TSA	AK	E	MC	O6	MWC	C4	C3		PS	C7
-----	----	---	----	----	-----	----	----	--	----	----

0E18	1SA	1E18	OTF	MW0	.	04	KW	.	06	KW	.
1SA	AK	E	06	MC	PN	MW0	C4	C3	PS		
C7	0E18	1SA	1E18	OTF	MW0	.	05	OW	.		

MW0 or test, zero side. Logic for zero side MW0 is on boards 340, 341, 440, 441, 439.

C2	.	C5	C6	MN	MW0	OE18	OSA	1E18	OTF
OSA									
MW0	01	.	.	MN	MW0	OE18	OSA	1E18	OTF
ISA	T0	TX	TP	OE18	OSA	1E18	OTF	MW0	. 01

OSA	C2	C5	C6	AK	02	E	06	TP	MW0	0E18
OSA	1E18	OTF	MW0	.	.	.	.	.	.	.
OSA	D	ND	05	03	PN	PN	0E18	0SA	1E18	0TF

[illegible][illegible][illegible]

OSA	C2	C5	C6	TX	AK	D	PN	MW0	OE18
-----	----	----	----	----	----	---	----	-----	------

OSA	1E18	OTF	MWO	.	05	1E18	OTF	.	MWO	.	05	.
1SA	K	ND	OE18	OSA		K	06	PV	MWO			OE18
OSA	C2	C5	C6	TX								

OSA	1E18	OTF	MNO	.	06	.	.	.
-----	------	-----	-----	---	----	---	---	---

297 Logic for terms for indexes 001-043 is on boards 304, 401, 408.

298 Logic for terms for indexes 001-015 is on boards 305, 401, 409.

299 Logic for terms for indexes 001-047 is on boards 307, 401, 409.

300 Logic for terms for indexes 001-043 is on boards 308, 401, 406.

[illegible]

Logic for terms for indexes 001-018 is on boards 309, 401, 406.
 Logic for terms for indexes 019-042 is on boards 310, 401, 406.
 Logic for terms for indexes 043-100 is on boards 310, 402, 406.

302 Logic for terms for indexes 001-047 is on boards 311, 401, 407.
 Logic for terms for indexes 048-110 is on boards 311, 402, 407.

Logic for terms is on boards 312, 401, 407.

[illegible]

Tape
stops
Marker
number

304	Logic for terms is on boards 313, 314, 402, 407.	OSA 61 CN4 CN7 . CN3 CN6	E8 . CN2 CFS . CN2 E3	CN7 . E4 CN5 OSA E4 E2	CFS OSA 1TA E2 E8 1TA E4	CN5 E8 MNF CN4 CN7 MNF 1TA	E3 CN7 62 CN3 CFS 64 MNF	CN4 CFS . E4 CN5 . 65	E4 CN5 . 1TA E3 . .	1TA E2 OSA MNF E1 OSA .	MNF E1 E8 63 CN4 CN7 .
305	Logic for terms for indexes 001-055 is on boards 303, 401, 408. Logic for terms for indexes 056-085 is on boards 303, 402, 408. Logic for terms for indexes 086-099 is on boards 304, 402, 408. Logic for terms for indexes 100-120 is on boards 304, 401, 408.	1SA 1TA E1 1SA MNF CN4 CN7 MNF CN3 CN6 . MNF	CN7 MNF CN4 CN7 03 E6 CN6 . E6 CN5 . 08	CN6 01 CN3 CN6 . E8 CN5 05 E8 E3 1SA	CN5 E6 CN5 . 1TA E2 . 1TA E1 CN7 .	E2 . E8 E3 1SA MNF E1 . MNF CN2 CN6 .	CN4 1SA 1TA CN4 CN7 04 CN3 1SA 06 E6 CN5	CN3 CN7 MNF CN2 CN6 . CN2 CN7 . E8 E2 .	CN2 CN6 . E6 CN5 . E6 CN6 . 1TA E6 .	E6 CN5 . E8 E2 . E8 CN5 1SA MNF E8 .	E8 E3 02 1TA E1 1SA 1TA E3 CN7 07 1TA .
306	Logic for terms for indexes 001-051 is on boards 304, 401, 408. Logic for terms for indexes 052-110 is on boards 305, 402, 408.	1SA MNF CN3 CN6 11 MNF CN2 CN6 1SA 15 MNF	CN7 . E7 E3 1SA 12 E7 E3 CN7 . .	CN6 . E8 CN4 CN7 . E8 CN3 CN6 . 16	E2 09 1TA CN2 CN6 . 1TA E7 E3 1SA .	CN4 1SA MNF E7 E2 1SA MNF E8 E1 CN7 .	CN3 CN7 10 E8 E1 CN7 . 1TA CN2 CN6	CN2 CN6 . 1TA CN4 CN6 13 MNF E7 E2 .	E7 E3 . MNF E7 E2 . . E8 E7 .	E8 E1 1SA . E8 E1 1SA 14 1TA E8 .	1TA CN4 CN7 . 1TA CN3 CN7 . MNF 1TA .

307

Logic for terms for indexes 001-029 is on boards 305, 401, 409.

Logic for terms for indexes 030-059 is on boards 306, 401, 409.

Logic for terms for indexes 060-120 is on boards 306, 402, 409.

1SA	E4	1TA	CN7	CN5	E2	CN4	CN3
E8	1TA	MNF	17	E6	E7	E8	1SA
E3	E1	CN4	CN3	E4	CN5	E3	E8
.	18	1SA	E4	MNF	19	.	E8
E7	E8	1TA	E1	CN4	E6	CN5	E2
CN5	E2	E1	1SA	E4	CN7	E1	21
.	.	E7	E8	1TA	MNF	E7	E2
E6	CN5	E3	E3	CN3	E6	E7	E1
CN7	E8	1TA	E4	MNF	23	E3	E3
E7	E8	E2	E6	E7	E8	1TA	MNF
CN5	E2						

308

Logic for terms for indexes 001-047 is on boards 307, 401, 409.

Logic for terms for indexes 048-071 is on boards 307, 402, 409.

Logic for terms for indexes 072-100 is on boards 308, 402, 409.

1SA	CN7	E2	CN4	TSA	CN7	E3	E6
E8	1TA	MNF	26	1TA	MNF	27	1SA
CN2	E6	E8	E6	E1	CN3	E3	E1
E2	E1	CN4	E1	1SA	E8	E6	MNF
1SA	CN7	E2	30	1TA	CN7	E3	CN3
29	.	.	31	.	32	.	1SA
MNF	1TA	MNF	MNF	.	.	.	.
E8	1TA						

309

Logic for terms for indexes 001-055 is on boards 308, 401, 406.

Logic for terms for indexes 056-110 is on boards 309, 402, 406.

1SA	CFS	CN6	CN5	E2	CN4	CFS	CN3
1TA	MNF	33	E7	E6	1TA	MNF	E7
E1	CN4	CN3	CN5	E3	CN4	CN2	CN6
1SA	CFS	CN6	E6	1SA	CFS	36	E7
MNF	35	E7	E2	1TA	MNF	CN3	CN5
CN4	E7	CN5	E1	1SA	CFS	E6	1TA
CN6	37	1TA	38	E7	E2	E7	E2
.	E6	E2	MNF	CN2	CN6	E5	E6
E6	E3	1SA	CN5	E7	E2	E3	E2
E3	1SA	CFS	CN6				

313

Read switch and test.

CN number channel

Logic for terms for indexes 001-008 is on boards 303, 304, 402.

Logic for terms for indexes 009-037 is on boards 304, 305.

Logic for terms for indexes 038-069 is on boards 305, 306.

Logic for terms for indexes 070-120 is on boards 307, 308.

OSA	CN7	CN6	CN5	E6	OTA			
01	CNL0	02	CNL1	03	CNL2	E8		
06	CNL5	07	CNL6	08	CNL7	EM5		
1SA	CN7	CN6	E7	E8	OTA	MNF		
09	CNL0	10	CNL1	11	CNL2	12		
14	CNL5	15	CNL6	16	CNL7			
1SA	CN7	CN5	E4	E6	E7	E8		
17	CNL0	18	CNL1	19	CNL2	20		
22	CNL5	23	CNL6	24	CNL7			
1SA	CN7	E6	E8	OTA	MNF			
25	CNL0	26	CNL1	27	CNL2	28		
30	CNL5	31	CNL6	32	CNL7			

314

Logic for terms for indexes 001-008 is on boards 308, 309.

Logic for terms for indexes 009-039 is on boards 309, 310.

Logic for terms for indexes 040-067 is on boards 311, 312.

Logic for terms for indexes 068-120 is on boards 312, 313.

1SA	CFS	CN6	CN5	E6	E7	OTA		
33	CNL0	34	CNL1	35	CNL2	36		
38	CNL5	39	CNL6	40	CNL7			
1SA	CFS	CN6	E4	E6	E7	E8		
41	CNL0	42	CNL1	43	CNL2	44		
46	CNL5	47	CNL6	48	CNL7			
1SA	CN6	CN5	E7	E8	OTA	MNF		
49	CNL0	50	CNL1	51	CNL2	52		
54	CNL5	55	CNL6	56	CNL7			
1SA	CN6	E6	E7	OTA	MNF			
57	CNL0	58	CNL1	59	CNL2	60		
62	CNL5	63	CNL6	64	CNL7	CNU0		

317

Logic for terms for indexes 001-012 is on boards 314, 401, 402.

Logic for terms for indexes 013-072 is on board 401.

Logic for terms for indexes 073-110 is on boards 401, 402.

Logic for terms for indexes 111-150 is on board 401.

1SA	CN7	CN6	CN5	E6	E8	TSF	CN4	CN3	CN2
OTA	MNF	CNLO	EM5	OSF	E2	OSF	CN4	OTA	MNF
CNLO	CN4-	CNLO	EM4	CNX	EM6	OSF	CN4	1SF	CN3
OTA	MNF	CNLO	CN3-	CNLO	EM3	OSF	CN3	1SF	CN2
OTA	MNF	CNLO	CN2-	CNLO	EM2	OSF	CN4	E1	CN2
1SA	CN7	CN6	CN5	E6	E8	OSF	CN4	E1	CN2
OTA	MNF	CNLO	CN3-	CNLO	EM4	OSF	OTA	CN2	CN1
OTA	MNF	CNLO	CN2	1SF	CN2	OSF	CN4	CN2	CN1
CN4-	CNLO	CNLO	CN5	E6	E8	OSF	CN4	CN2	CN1
1SA	CN7	CN6	CN5	OSF	E8	OSF	CN4	CN2	CN1
MNF	CNLO	CNLO	CNLO	CNLO	EM2	OSF	CN4	CN2	CN1
CNLO	CNLO	CNLO	CNLO	CNLO	EM2	OSF	CN4	CN2	CN1
1SA	CN7	CN6	CN5	OSF	E8	OSF	CN4	CN2	CN1
MNF	CNLO	CNLO	CNLO	CNLO	EM2	OSF	CN4	CN2	CN1
CN3	CNLO	CNLO	CNLO	CNLO	EM2	OSF	CN4	CN2	CN1

318

Logic for terms is on board 402.

1SA	CN7	CN6	CN5	E6	E8	TSF	CN4	CN3	CN2
OTA	MNF	CNLO	CN2-	OSF	E2	OSF	CN4	OTA	MNF
CNLO	CN4	CNLO	1SF	CN4	OSF	OSF	CN4	OTA	MNF
1SA	CN7	CN6	CN5	E6	E8	OSF	CN4	OTA	MNF
1SF	CN2	CNLO	OSF	CNLO	EM2	OSF	CN4	OTA	MNF
1SA	CN7	CN6	CN5	OSF	E8	OSF	CN4	OTA	MNF
MNF	CNLO	CNLO	CNLO	CNLO	EM2	OSF	CN4	OTA	MNF
CN3	CNLO	CNLO	CNLO	CNLO	EM2	OSF	CN4	OTA	MNF
1SA	CN7	CN6	CN5	OSF	E8	OSF	CN4	OTA	MNF
MNF	CNLO	CNLO	CNLO	CNLO	EM2	OSF	CN4	OTA	MNF
CNLO	CNLO	CNLO	CNLO	CNLO	EM2	OSF	CN4	OTA	MNF
CN4	CNLO	CNLO	CNLO	CNLO	EM2	OSF	CN4	OTA	MNF

NOTE

Will indicate error if computer has not been modified.

321

Read switch or test. CP program channel.

Logic for terms for indexes 001-043 is on boards 303, 403, 405.
 Logic for terms for indexes 044-070 is on boards 303, 404, 405.
 Logic for terms for indexes 071-100 is on boards 304, 404, 405.
 Logic for terms for indexes 101-120 is on boards 303, 305, 314.

OSA	E7	OSA	E3	E1	E4	K	1TA
.	.	MPF	E7	E2	CP2	E4	K
MPF	03	MPF	.	04	.	05	MPF
K	1TA	1TA	MPF	MPF	.	1TA	MPF
E4	K	CP2	E4	CP4	CP3	E4	K
E1	CP4	E2	CP3	E7	CP3	E1	CP4
USA	E7	OSA	CP6	CP6	E7	E8	1TA
.	.	MPF	CP6	CP6	E7	E8	MPF
K	1TA	CP7	E7	E1	CP4	CP4	MPF
1SA	CP7	E7	E1	CP4	CP4	CP4	MPF
OSA	E7	E1	CP4	CP4	CP4	CP4	MPF

322

Logic for terms for indexes 001-047 is on boards 304, 403, 405.
 Logic for terms for indexes 048-110 is on boards 305, 404, 405.

OSA	E6	CP5	OSA	E3	E6	MPF	1TA
MPF	10	CP2	CP5	CP5	CP5	CP5	CP5
E4	K	CP3	CP5	CP5	CP5	CP5	CP5
E3	CP3	CP5	CP5	CP5	CP5	CP5	CP5
OSA	E6	CP5	CP5	CP5	CP5	CP5	CP5
.	.	MPF	MPF	MPF	MPF	MPF	MPF
K	1TA	CP5	CP5	CP5	CP5	CP5	CP5
CP4	CP3	CP5	CP5	CP5	CP5	CP5	CP5
E3	E1	CP5	CP5	CP5	CP5	CP5	CP5
MPF	.	CP5	CP5	CP5	CP5	CP5	CP5

Tape Marker
stops number

323

Logic for terms for indexes 001-017 is on boards 305, 403, 405.
 Logic for terms for indexes 018-042 is on boards 306, 403, 405.
 Logic for terms for indexes 043-090 is on boards 306, 404, 405.

OSA	CP6	E3	K	1TA	MPF
OSA	CP6	E2	K	1TA	MPF
OSA	CP6	E2	CP3	K	1TA
20	OSA	CP6	E3	K	K
21	OSA	CP6	E2	CP4	CP4
MPF	22	OSA	E2	CP6	E2
1TA	MPF	23	OSA	CP6	CP6
CP3	CP2	1TA	MPF	24	.

17
 MPF
 1TA
 1TA
 CP2
 CP4
 E3
 .

18
 MPF
 MPF
 K
 CP3
 E1
 .

19
 .
 .
 1TA
 K
 CP4
 .

324

Logic for terms for indexes 001-051 is on boards 307, 403, 405.
 Logic for terms for indexes 052-082 is on boards 307, 404, 405.
 Logic for terms for indexes 083-120 is on boards 308, 404, 405.

OSA	E7	CP6	E3	E1	E4
25	OSA	E7	CP6	CP5	CP5
1TA	MPF	26	.	OSA	OSA
E1	CP3	E4	K	1TA	MPF
OSA	CP6	CP5	E3	CP3	CP2
MPF	28	OSA	OSA	E7	CP6
E4	K	MPF	29	.	.
CP5	E2	CP4	CP2	E4	K
30	OSA	E7	CP6	CP5	E2
K	1TA	MPF	31	OSA	OSA
E3	E1	CP4	CP3	E4	K
.

K
 E2
 E7
 .
 E4
 CP5
 OSA
 1TA
 CP4
 E7
 1TA
 32

1TA
 CP2
 CP6
 .
 K
 E3
 E7
 MPF
 CP3
 CP6
 MPF
 .

MPF
 E4
 CP5
 27
 1TA
 CP4
 CP6
 .
 E4
 CP5
 .
 .

325

Logic for terms for indexes 001-047 is on boards 308, 316, 403.
 Logic for terms for indexes 048-110 is on boards 309, 316, 404.

OSA	E8	CP7	E3	E1	E4
33	OSA	CP7	E1	E2	CP2
MPF	34	OSA	CP7	E8	CP7
E4	MPF	35	MPF	CP2	CP7
E3	E4	K	1TA	CP2	CP7
OSA	CP3	CP4	CP4	E4	MPF
37	CP8	CP7	E3	E2	K
OSA	OSA	CP7	E8	CP7	E1
K	MPF	38	MPF	CP7	OSA
CP4	E4	1TA	CP2	CP2	39
E3	CP4	CP2	CP2	CP2	CP7
MPF	MPF

1TA
 E4
 E2
 OSA
 36
 1TA
 CP4
 E8
 .
 E4
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MPF
 K
 E1
 E8
 .
 MPF
 CP2
 CP7
 .
 K
 .

1TA
 CP3
 CP7
 .
 37
 E4
 E2
 OSA
 1TA
 40

326

Logic for terms for indexes 001-020 is on boards 309, 316, 403.

Logic for terms for indexes 021-050 is on boards 310, 316, 403.

Logic for terms for indexes 051-110 is on boards 310, 316, 404.

OSA	CP5	CP7	E3	CP5	E1	K	CP7	E2	CP5	CP7	1TA
.	41	OSA	42	CP7	CP5	CP7	CP5	CP5	CP5	CP7	CP7
K	1TA	MPF	.	MPF	43	MPF	44	MPF	45	MPF	MPF
E3	CP3	CP2	K	1TA	CP4	K	CP4	CP4	K	CP4	CP3
OSA	CP5	CP7	E3	CP5	CP7	E2	CP5	CP5	E2	CP5	CP7
1TA	MPF	.	1TA	46	MPF	.	CP5	CP5	CP5	CP5	CP7
CP4	CP3	K	1TA	CP2	CP2	CP5	CP5	CP5	CP5	CP5	CP7
E3	E1	CP4	CP3	CP2	CP2	CP5	CP5	CP5	CP5	CP5	CP7
.	.	.	.	.	.	48	.	.	.	.	.

327

Logic for terms for indexes 001-051 is on boards 311, 314, 403.

Logic for terms for indexes 052-120 is on boards 311, 314, 404.

OSA	E6	CP7	CPFS	E3	CP7	E1	CP7	CPFS	E4	CPFS
.	49	MPF	50	E6	CP7	CP7	CP7	CP7	CP7	CP7
K	1TA	CP3	E4	K	1TA	CP3	CP3	CP3	CP3	CP3
OSA	E6	CP7	CPFS	E3	CP7	CP7	CP7	CP7	CP7	CP7
MPF	52	1TA	MPF	53	CP2	CP7	CP7	CP7	CP7	CP7
E4	K	E1	CP4	CP4	CP7	CP7	CP7	CP7	CP7	CP7
CPFS	E2	OSA	E6	CP4	CP7	CP7	CP7	CP7	CP7	CP7
.	54	MPF	55	CP3	CP2	CP2	CP2	CP2	CP2	CP2
K	1TA	CP4	CP3	CP3	CP2	CP2	CP2	CP2	CP2	CP2
E3	E1	CP4	CP3	CP3	CP2	CP2	CP2	CP2	CP2	CP2
.

328

Logic for terms is on boards 312, 314, 403.

Logic for terms is on boards 312, 314, 403.

OSA	E8	CP7	CPFS	CP5	CP7	E1	CP7	CPFS	E4	CPFS
MPF	57	CP7	CPFS	CP5	CP7	CP7	CP7	CP7	CP7	CP7
CP2	E4	K	1TA	MPF	CP7	CP7	CP7	CP7	CP7	CP7
CP7	CPFS	CP5	E2	CP7	CP7	CP7	CP7	CP7	CP7	CP7
59	.	.	OSA	E8	CP7	CP7	CP7	CP7	CP7	CP7
CP2	E4	K	1TA	MPF	CP7	CP7	CP7	CP7	CP7	CP7
.

329

Logic for terms is on boards 313, 314, 404.

Logic for terms is on boards 313, 314, 404.

OSA	E8	CP7	CPFS	CP5	CP7	E1	CP7	CPFS	E4	CPFS
MPF	61	CP7	CPFS	CP5	CP7	CP7	CP7	CP7	CP7	CP7
E1	CP4	CP2	E4	CP5	CP7	CP7	CP7	CP7	CP7	CP7
OSA	E8	CP7	CPFS	CP5	CP7	CP7	CP7	CP7	CP7	CP7
1TA	MPF	63	CP3	CP2	CP7	CP7	CP7	CP7	CP7	CP7
E3	E1	CP4	CP7	CP2	CP7	CP7	CP7	CP7	CP7	CP7
.	.	OSA	CP7	CP6	CP7	CP7	CP7	CP7	CP7	CP7
MPF	65
.

Marker number	Tape stops
1	1
2	2
3	3
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95	95
96	96
97	97
98	98
99	99
100	100

330

Logic for terms for indexes 001-055 is on boards 303, 403, 405.	1SA	CP7	CP6	CP5	E2	CP4	CP3	CP7
Logic for terms for indexes 056-085 is on boards 303, 404, 405.	1TA	MPF	01	E6	E8	1TA	MPF	CP7
Logic for terms for indexes 086-099 is on boards 304, 404, 405.	E1	CP4	CP3	CP5	E3	CP4	CP2	MPF
Logic for terms for indexes 100-120 is on boards 304, 403, 405.	1SA	MPF	03	E8	1SA	CP7	CP6	CP6
	CP4	E6	E8	1TA	MPF	04	CP2	CP7
	CP7	CP6	CP5	E2	E1	CP3	CP2	CP7
	MPF	E6	05	1TA	MPF	1SA	CP7	CP7
	CP3	CP5	E8	E1	CP2	E6	E8	E8
	CP6	08	1SA	CP7	CP6	CP5	E2	E2
	MPF							

E8	E6	CP2
E3	CP5	CP6
02	.	E6
1TA	E8	CP5
E1	E2	CP6
1SA	.	E6
1TA	E8	CP6
E3	CP5	.
CP7	1SA	1TA
07	MPF	E6
1TA	E8	.
.	.	.

331

Logic for terms for indexes 001-051 is on boards 304, 403, 405.
Logic for terms for indexes 052-110 is on boards 305, 404, 405.

E7	E8	1TA
E3	E1	CP4
MPF	1SA	CP7
E7	E8	1TA
E2	E1	CP3
.	1SA	CP7
.	14	MPF
E8	1TA	1TA
E7	E8	.

332

Logic for terms for indexes 001-029 is on boards 305, 403, 405.
 Logic for terms for indexes 030-059 is on boards 306, 403, 405.
 Logic for terms for indexes 060-120 is on boards 306, 404, 405.

E7	CP5	.	E6	20	CP2	E4	22	E6	CP7	.
CP2	E4	1TA	CP4	1SA	E1	.	1TA	E1	1SA	24
E6	CP7	MPF	CP2	MPF	CP3	1SA	MPF	CP2	E4	.

333

Logic for terms for indexes 001-023 is on boards 307, 403, 405.

Logic for terms for indexes 024-071 is on boards 307, 404, 405.

Logic for terms for indexes 072-100 is on boards 308, 404, 405.

ISA	CP7	E2	CP4	CP3	CP2	E6	1TA	E1	MPF	E8	CP4	1TA	MPF
	25	MPF	1SA	CP7	E3	E1	26	1SA	27	CP7	CP7	E3	28
CP2	1TA	E8	1TA	MPF	27	1TA	1TA	MPF	27	1TA	MPF	1TA	MPF
E2	E1	CP4	E6	E8	CP2	CP2	E6	E6	CP2	E6	E6	CP2	1TA
1SA	CP7	E2	E1	CP3	E3	CP3	CP7	E3	CP3	E1	CP2	E2	1TA
29	.	30	1SA	CP7	CP7	E3	1SA	CP7	CP7	E1	CP2	E2	1TA
MPF	.	30	1SA	CP7	CP7	E3	1SA	CP7	CP7	E1	CP2	E2	1TA
E8	1TA	MPF	31	.	32	1SA	31	1SA	32	1SA	31	1SA	32
E8	1TA	MPF	MPF	.	32	1SA	MPF	MPF	32	1SA	MPF	MPF	32

334

Logic for terms for indexes 001-055 is on boards 308, 316, 403.

Logic for terms for indexes 056-110 is on boards 309, 316, 404.

Logic for terms for indexes 111-160 is on boards 310, 316, 404.

ISA	CPFS	CP6	CP5	E2	CP4	CP3	CPFS	E6	CPFS	E7	CP5	CP6	CPFS
1TA	MPF	33	E7	.	1TA	MPF	34	1TA	MPF	35	1TA	MPF	36
E1	CP4	CP3	CP5	E3	CP4	CP5	CP6	CP4	CP5	CP6	CP4	CP5	CP6
1SA	CPFS	CP6	CP5	E6	1TA	MPF	36	1TA	MPF	37	1TA	MPF	38
MPF	35	E6	1TA	MPF	36	1TA	MPF	37	1TA	MPF	38	1TA	MPF
CP4	E7	E2	1TA	MPF	37	1TA	MPF	38	1TA	MPF	39	1TA	MPF
CP6	CP5	E2	1SA	CPFS	CP6	CP5	CP6	CP6	CP5	CP6	CP5	CP6	CP5
.	37	MPF	38	CPFS	CP6	CP5	CP6	CP6	CP5	CP6	CP5	CP6	CP5
E6	1TA	CP2	E7	E6	1TA	MPF	E7	1TA	MPF	E7	1TA	MPF	E7
E3	E1	CP6	CP5	E2	1TA	MPF	E2	1TA	MPF	E2	1TA	MPF	E2
1SA	CPFS	CP6	CP5	E2	1TA	MPF	E2	1TA	MPF	E2	1TA	MPF	E2

335

Logic for terms for indexes 001-029 is on boards 309, 316, 403.

Logic for terms for indexes 030-049 is on boards 310, 316, 403.

Logic for terms for indexes 050-120 is on boards 310, 316, 404.

ISA	CPFS	CP6	CP5	E2	CP4	CP3	CPFS	E6	CPFS	E7	CP5	CP6	CPFS
E8	MPF	41	E7	.	1TA	MPF	42	1TA	MPF	43	1TA	MPF	44
E3	CP4	CP3	CP5	E6	CP4	CP5	CP6	CP4	CP5	CP6	CP4	CP5	CP6
.	42	1SA	MPF	43	1TA	MPF	44	1TA	MPF	45	1TA	MPF	46
E7	E8	1TA	MPF	44	1TA	MPF	45	1TA	MPF	46	1TA	MPF	47
CP6	E2	1SA	CP4	E6	CP4	CP5	CP6	CP4	CP5	CP6	CP4	CP5	CP6
.	43	1SA	CP4	E6	CP4	CP5	CP6	CP4	CP5	CP6	CP4	CP5	CP6
E6	E7	1SA	CP4	E6	CP4	CP5	CP6	CP4	CP5	CP6	CP4	CP5	CP6
CPFS	CP6	E8	CP3	MPF	CP3	CP4	CP5	CP3	CP4	CP5	CP3	CP4	CP5
.	44	1SA	CP3	MPF	CP3	CP4	CP5	CP3	CP4	CP5	CP3	CP4	CP5
E7	E8	1TA	CP3	MPF	CP3	CP4	CP5	CP3	CP4	CP5	CP3	CP4	CP5
CP6	E2	1TA	CP3	MPF	CP3	CP4	CP5	CP3	CP4	CP5	CP3	CP4	CP5

17	CPL0	18	CPL1	19	CPL2	20	CPL3	21	CPL4
22	CPL5	23	CPL6	24	CPL7	.	.	.	.
1SA	CP7	E6	E8	OTA	MPF	.	.	.	.
25	CPL0	26	CPL1	27	CPL2	28	CPL3	29	CPL4
30	CPL5	31	CPL6	32	CPL7	.	.	.	.
339	Logic for terms for indexes 001-008 is on boards 308, 309.								
	Logic for terms for indexes 009-039 is on boards 309, 310.								
	Logic for terms for indexes 040-067 is on boards 311, 312.								
	Logic for terms for indexes 048-120 is on boards 312, 313.								
1SA	CPFS	CP6	CP5	E6	E7	OTA	MPF	37	CPL4
33	CPL0	34	CPL1	35	CPL2	36	CPL3	.	.
38	CPL5	39	CPL6	40	CPL7	E8	OTA	MPF	.
1SA	CPFS	CP6	E4	E6	E7	44	CPL3	45	CPL4
41	CPL0	41	CPL1	43	CPL2	.	.	.	.
46	CPL5	47	CPL6	48	CPL7	MPF	.	.	.
1SA	CP6	CP5	E7	E8	OTA	52	CPL3	53	CPL4
49	CPL0	50	CPL1	51	CPL2	.	.	.	.
54	CPL5	55	CPL6	56	CPL7	.	.	.	.
1SA	CP6	E6	E7	OTA	MPF	60	CPL3	61	CPL4
57	CPL0	58	CPL1	59	CPL2	CPU0	.	.	.
62	CPL5	63	CPL6	64	CPL7	.	.	.	.
340	Logic for terms for indexes 001-007 is on boards 303, 304, 405.								
	Logic for terms for indexes 008-037 is on boards 304, 305.								
	Logic for terms for indexes 038-067 is on boards 305, 306.								
	Logic for terms for indexes 068-120 is on boards 307, 038.								
OSA	E4	E3	E1	K	OTA	MPF	CPU3	05	CPU4
01	CPU0	02	CPU1	03	CPU2	04	E7	.	.
06	CPU5	07	CPS4	08	CPS5	CPU0	.	.	.
OSA	E4	E2	CP2	K	OTA	MPF	CPU3	13	CPU4
09	CPU0	10	CPU1	11	CPU2	.	.	.	.
14	CPU5	15	CPS4	16	CPS5	.	.	.	.
OSA	E4	E2	CP3	K	OTA	MPF	CPU3	21	CPU4
17	CPU0	18	CPU1	19	CPU2	20	.	.	.
22	CPU5	23	CPS4	24	CPS5	.	MPF	.	.
OSA	E4	E3	CP3	CP2	K	OTA	CPU3	29	CPU4
25	CPU0	26	CPU1	27	CPU2	28	.	.	.
30	CPU5	31	CPS4	32	CPS5	.	.	.	.

CPL5	CP3-	OSF	CP3	CP2	OTA	MPF	CPL5	CP2
1SF	CP2	CP4	OTA	MPF	CPL5	CP4	E1	OTA
1SA	CP7	CP5	E6	E8	CP3	E3	MPF	CPL6
MPF	CPL6	CP2-	OSF	CP2	OTA	MPF	CP2	CP4
CP3	CP7	1SF	OSF	CP4	CP3	E2	CP2	OTA
1SA	CP7	CP5	E6	E8	OSF	CP3	OTA	MPF
MPF	CPL7	CP2	1SF	CP2	CP4	OTA	MPF	CPL7
CPL7	CP3	1SF	CP3	OSF	CP4	CP4	CP4	CP7
CP4	.	.	.	.	.	.	.	.

344

Logic for terms for indexes 001-021 is on board 405.
 Logic for terms for indexes 022-033 is on boards 314, 405.
 Logic for terms for indexes 034-048 is on boards 314, 405,
 Logic for terms for indexes 049-059 is on boards 314, 405.
 Logic for terms for indexes 060-107 is on board 405.
 Logic for terms for indexes 108-119 is on boards 314, 316.
 Logic for terms for indexes 120-144 is on board 316.
 Logic for terms for indexes 145-160 is on boards 314, 316.

1SA	E2	E6	E8	CP7	CP6	OTA	MPF	CPU0
CP5-	CPU1	CP3	CP6	OSF	CP5	TSF	CP6	OTA
MPF	CPU0	CP6-	E4-	CP3	CP5	OSF	CP6	1SF
CP7	OTA	MPF	CP7-	CNS4	E6	MPF	CPU1	CP7-
1SA	E2	CP54	CP5	CP6	OTA	OTA	MPF	CPU1
CP55	E8	CP7	OSF	CP7	CP5	CP7	OTA	CP6-
CP5	CP54	CP3	E6	E7	CP6	CP7	MPF	MPF
1SA	E2	CP3	CP6	CP5	CP5	CP6	OTA	CP2
CPU2	CP5-	1SF	CP7	CP7	MPF	CP2	CP7-	.
CP6	.	.	E8	CP6	CP5	CP3	MPF	.
1SA	E2	CP5	E6	CP6	CP5	CP4	CP4	CP4
1SA	E2	CP5	E6	CP7	CP5	CP6	CP5	CP7
CPFS-	CP55	CP7	CP5	CPFS	CP6	CP6-	CP5	CP5
.	1SF	CP7	CP6	CP4	CP4	1SF	E8	.
CP6	E8	OTA	MPF	CP5	CP5	CPFS	.	.
OTA	MPF	CPU4	CP5-	E4-	CP55	.	.	.

345

Logic for terms for indexes 001-034 is on board 316.
 Logic for terms for indexes 035-120 is on board 314.

1SA	E2	E4	E6	E7	E8	CP6	OTA	MPF
CPU5	CPFS	OSF	CPFS	CP7	OTA	CP5	CP5	CP7
CP6	1SF	CP7	CP6	MPF	CP5	CP6-	CP6-	CP7
1SA	E2	CP5	CP5	CP5	CP5	CP6-	CP6-	CP7
OSF	CP6	CP7	E7	CP5	CP5	CP6-	CP6-	CP7
OSF	CP6	CP7	CP5	CP5	CP5	CP6-	CP6-	CP7
1SA	CPFS	OTA	MPF	CP54	CPFS	CP6-	CP6-	CP7
OSF	E2	CP7	E6	CP5	CP5	CP6-	CP6-	CP7
OSA	CP6	CP7	MPF	CP5	CP5	CP6-	CP6-	CP7
E3	E4	CP7	OTA	CP5	CP5	CP6-	CP6-	CP7
CP6	OSF	CP7	CP6	CP6	CP6	CP6-	CP6-	CP7

Tape stops Marker number

MAIN MEMORY DYNAMIC CHANNEL TESTS.

Each of the 64 channels is tested for writing and reading a change from 0 to 1 and 1 to 0. All logic and write amps involved in the main memory dynamic channel test have been tested previously in this tape, hence any errors will be caused by the main memory read amps (301 and 302), the read switch boards, network C (323), memory plugs, and memory itself. If an error occurs, replacement of boards should be accomplished first and FADAC retested. If the error persists, removal, cleaning, and resealing of the memory plug specified should be next accomplished and FADAC retested. If the error still persists, the memory itself should be replaced. Place the WR SW in the enable position and connect the memory plug (p9).

346 Logic for channel is on boards 301, 302, 303, 323, and plug P1.

CHANNEL 000									
OSA	E7	E4	E3	E1	K				MW0
T	I	M	E	.	.	.	.	.	Y
OSF	MMN	MMP	MW0	E5	1SF	E	L	A	.
T	I	M	E	E5	D	MW1	.	.	Y
1TF	MMN	MMP	OSF	MW1	D	E	L	A	.
T	I	M	E	.	1SF	MW0	.	.	Y
OTF	MMN	MMP	E	.	D	E	L	A	.
		
CHANNEL 002									
OSA	E7	E4	E2	CN2	CP2	C2	K	E5	MW0
T	I	M	E	.	D	E	.	A	Y
OSF	MMN	MMP	MW0	E5	1SF	MW1	L	.	.
T	I	M	E	E5	D	E	.	A	Y
1TF	MMN	MMP	OSF	MW1	D	MW0	L	.	Y
T	I	M	E	.	1SF	E	.	A	.
OTF	MMN	MMP	E	.	D	.	.	.	.

347 Logic for channel is on board 303, plug P1.

CHANNEL 004									
OSA	E7	E4	E2	E1	CN3	CP3	C3	K	MW0
T	I	M	E	.	D	E	.	E5	Y
OSF	MMN	MMP	MW0	E5	1SF	MW1	L	A	.
T	I	M	E	E5	D	E	.	.	Y
1TF	MMN	MMP	OSF	MW1	D	MW0	L	A	.
T	I	M	E	.	1SF	E	.	A	Y
OTF	MMN	MMP	E	.	D	.	.	.	.

CHANNEL 006
 OSA E7
 K I
 T MMN
 OSF I
 T MMN
 1TF MMN
 T I
 OTF MMN

E4 M
 MMP
 M
 MMP
 M
 MMP

E3 E
 MMW
 E
 OSF
 E

CN3
 E5
 MW1

CP3 D
 1SF
 1SF
 D

C3 E
 MW1
 MMW
 E

CN2 L
 L
 L

CP2 E5 A
 A
 A

C2 MMW
 Y
 Y
 Y

CHANNEL 010
 OSA E7
 T I
 OSF MMN
 T I
 1TF MMN
 T I
 OTF MMN

E4 M
 MMP
 M
 MMP
 M
 MMP

E3 E
 MMW
 E
 OSF
 E

CN4
 E5
 MW1

CP4 D
 1SF
 1SF
 D

C4 E
 MW1
 MMW
 E

K L
 L
 L

E5 A
 A
 A

MMW
 Y
 Y
 Y

CHANNEL 012
 OSA E7
 C2 K
 T I
 OSF MMN
 T I
 1TF MMN
 T I
 OTF MMN

E4 M
 MMP
 M
 MMP
 M
 MMP

E2 E
 MMW
 E
 OSF
 E

E1
 E5
 MW1

CN4 D
 1SF
 1SF
 D

CP4 E
 MW1
 MMW
 E

C4 L
 L
 L

CN2 E5 A
 A
 A

CP2 MMW
 Y
 Y
 Y

Logic for channel 1 is on board 304, plug P1.

CHANNEL 014
 OSA E7
 K I
 T MMN
 OSF I
 T MMN
 1TF MMN
 T I
 OTF MMN

E4 M
 MMP
 M
 MMP
 M
 MMP

E2 E
 MMW
 E
 OSF
 E

CN4
 E5
 MW1

CP4 D
 1SF
 1SF
 D

C4 E
 MW1
 MMW
 E

CN3 L
 L
 L

CP3 E5 A
 A
 A

C3 MMW
 Y
 Y
 Y

348

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stops number

CHANNEL 016
 OSA E7
 C3 T CN2 I
 OSF MMN I
 TTF MMN I
 T I
 OTF MMN

E4 CP2 M
 MMP M
 MMP MMN
 T I
 OTF MMN

E3 C2 E
 MW0 E
 OSF E
 .

E1 K
 E5
 MW1
 .

CN4
 . D
 TSF D
 TSF D
 .

CP4
 . E
 MW1 E
 MW0 E
 .

C4
 . L
 . L
 . L
 .

CN3 E5 A
 . A
 . A
 .

CP3 MW0 Y
 . Y
 . Y
 .

350

CHANNEL 020
 OSA E6
 . T I
 OSF MMN I
 TTF MMN I
 T I
 OTF MMN

E4 . M
 MMP M
 MMP M
 M M
 MMP

CN5 . E
 MW0 E
 OSF E
 .

CP5 .
 E5
 MW1
 .

C5 . D
 TSF D
 TSF D
 .

E3 . E
 MW1 E
 MW0 E
 .

E1 . L
 . L
 . L
 .

K E5 A
 . A
 . A
 .

MW0 Y
 . Y
 . Y
 .

CHANNEL 022
 OSA E6
 K T I
 OSF MMN I
 TTF MMN I
 T I
 OTF MMN

E4 . M
 MMP M
 MMP M
 M M
 MMP

CN5 . E
 MW0 E
 OSF E
 .

CP5 .
 E5
 MW1
 .

C5 . D
 TSF D
 TSF D
 .

E2 . E
 MW1 E
 MW0 E
 .

CN2 . L
 . L
 . L
 .

CP2 E5 A
 . A
 . A
 .

C2 MW0 Y
 . Y
 . Y
 .

Logic for channel 1 is on board 304, plug P2.

351

CHANNEL 024
 OSA E6
 C3 K I
 OSF MMN I
 TTF MMN I
 T I
 OTF MMN

E4 . M
 MMP M
 MMP M
 M M
 MMP

CN5 . E
 MW0 E
 OSF E
 .

CP5 .
 E5
 MW1
 .

C5 . D
 TSF D
 TSF D
 .

E2 . E
 MW1 E
 MW0 E
 .

E1 . L
 . L
 . L
 .

CN3 E5 A
 . A
 . A
 .

CP3 MW0 Y
 . Y
 . Y
 .

CHANNEL 026

OSA	E6	E4	CN5	CP5	C5	E3	CN3	CP3	C3
CN2	CP2	C2	K	.	.	E	.	E5	MW0
T	I	M	E	E5	D	MW1	L	A	Y
OSF	MMN	MMP	MW0	.	1SF	E	.	.	.
T	I	M	E	MW1	D	MW0	L	A	.
1TF	MMN	MMP	OSF	.	1SF	E	L	A	.
T	I	M	E	.	D	.	.	.	.
OTF	MMN	MMP	.	.	.	.	.	.	.

352 Logic for channel 1 is on board 305, plug P2.

CHANNEL 030

OSA	E6	E4	CN5	CP5	C5	E3	CN4	CP4	C4
K	.	.	E	.	.	E	.	E5	MW0
T	I	M	E	E5	D	MW1	L	A	Y
OSF	MMN	MMP	MW0	.	1SF	E	.	.	.
T	I	M	E	MW1	D	MW0	L	A	.
1TF	MMN	MMP	OSF	.	1SF	E	.	.	.
T	I	M	E	.	D	.	.	.	.
OTF	MMN	MMP	.	.	.	.	.	.	.

CHANNEL 032

OSA	E6	E4	CN5	CP5	C5	E2	E1	CN4	CP4
C4	CN2	CP2	C2	K	.	E	.	E5	MW0
T	I	M	E	.	D	MW1	L	A	Y
OSF	MMN	MMP	MW0	E5	1SF	E	.	.	.
T	I	M	E	.	D	MW0	L	A	.
1TF	MMN	MMP	OSF	MW1	1SF	E	.	.	.
T	I	M	E	.	D	.	.	.	.
OTF	MMN	MMP	.	.	.	.	.	.	.

CHANNEL 034

OSA	E6	E4	CN5	CP5	C5	E2	CN4	CP4	C4
CN3	CP3	C3	K	.	.	E	.	E5	MW0
T	I	M	E	E5	D	MW1	L	A	Y
OSF	MMN	MMP	MW0	.	1SF	E	.	.	.
T	I	M	E	MW1	D	MW0	L	A	.
1TF	MMN	MMP	OSF	.	1SF	E	.	.	.
T	I	M	E	.	D	.	.	.	.
OTF	MMN	MMP	.	.	.	.	.	.	.

353

CHANNEL 036

354

CHANNEL 040

CHANNEL 042

355 **Logic for channel 1 is on board 306, plug P2.**

CHANNEL 044

	CN5	CP6	C6	E2	E1	CN3	CP3	C3	K
OSA	I	M	E	.	D	E	L	E5	MMO
	MMN	MMP	MMO	E5	1SF	MM1	.	A	Y
	I	M	E	MM1	D	E	L	.	Y
	MMN	MMP	OSF	.	1SF	MMO	L	A	Y
	I	M	E	.	D	E	.	.	.
OTF	MMN	MMP	.	.	.	.	.	.	.

CHANNEL 046
 OSA CN6
 C2 K I
 T MMN
 OSF I
 T MMN
 1TF I
 T MMN
 OTF MMN

CP6
 M
 MMP
 M
 MMP
 M
 MMP

C6
 E
 MM0
 E
 OSF
 E

E3
 E5
 MW1

CN3
 D
 TSF
 D
 TSF
 D

CP3
 E
 MW1
 E
 MM0
 E

C3
 L

CN2
 E5
 A
 A
 A

CP2
 MM0
 Y
 Y
 Y

356

CHANNEL 050
 OSA CN6
 T I
 OSF MMN
 T I
 1TF MMN
 T I
 OTF MMN

CP6
 M
 MMP
 M
 MMP
 M
 MMP

C6
 E
 MM0
 E
 OSF
 E

E3
 E5
 MW1

CN4
 D
 TSF
 D
 TSF
 D

CP4
 E
 MW1
 E
 MM0
 E

C4
 L

K E5
 A
 A
 A

MM0
 Y
 Y
 Y

CHANNEL 052
 OSA CN6
 C2 I
 T MMN
 OSF I
 T MMN
 1TF I
 T MMN
 OTF MMN

CP6
 K
 M
 MMP
 M
 MMP
 M
 MMP

C6
 E
 MM0
 E
 OSF
 E

E2
 E5
 MW1

E1
 D
 TSF
 D
 TSF
 D

CN4
 E
 MW1
 E
 MM0
 E

CP4
 L
 L
 L

C4
 E5
 A
 A
 A

CN2
 MM0
 Y
 Y
 Y

357

CHANNEL 054
 OSA CN6
 C3 K I
 T MMN
 OSF I
 T MMN
 1TF I
 T MMN
 OTF MMN

CP6
 M
 MMP
 M
 MMP
 M
 MMP

C6
 E
 MM0
 E
 OSF
 E

E2
 E5
 MW1

CN4
 D
 TSF
 D
 TSF
 D

CP4
 E
 MW1
 E
 MM0
 E

C4
 L
 L
 L

CN3
 E5
 A
 A
 A

CP3
 MM0
 Y
 Y
 Y

CHANNEL 056
 OSA CN6
 C3 I
 T MMN
 OSF I
 T MMN
 1TF I
 T MMN
 OTF MMN

CP6
 C2
 M
 MMP
 M
 MMP
 M
 MMP

C6
 CP2
 E
 MM0
 E
 OSF
 E

E3
 C2
 E5
 MW1

E1
 K
 D
 TSF
 D
 TSF
 D

CN4
 E
 MW1
 E
 MM0
 E

CP4
 L
 L
 L

C4
 E5
 A
 A
 A

CN3
 MM0
 Y
 Y
 Y

Tape stops
Marker number

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Logic for channel is on board 307, plug P2.

CHANNEL 060

OSA	E7	E4	CN6	CP6	C6	CN5	CP5	C5	E3
E1	K	.	E	.	D	E	.	E5	MW0
T	I	M	MW0	E5	TSF	MW1	L	A	Y
OSF	MMN	MMP	E	.	D	E	.	.	.
T	I	M	MW0	.	D	E	.	.	.
1TF	MMN	MMP	OSF	MW1	TSF	MW0	L	A	Y
T	I	M	E	.	D	E	.	.	.
OTF	MMN	MMP	.	.	.	.	.	.	.

CHANNEL 062

OSA	E7	E4	CN6	CP6	C6	CN5	CP5	C5	E2
CN2	CP2	C2	K	.	D	E	.	E5	MW0
T	I	M	E	E5	TSF	MW1	L	A	Y
OSF	MMN	MMP	MW0	.	D	E	.	.	.
T	I	M	E	MW1	D	E	L	A	Y
1TF	MMN	MMP	OSF	.	TSF	MW0	.	A	Y
T	I	M	E	.	D	E	L	.	.
OTF	MMN	MMP	.	.	.	.	.	.	.

359

CHANNEL 064

OSA	E7	E4	CN6	CP6	C6	CN5	CP5	C5	E2
E1	CN3	CP3	C3	K	D	E	.	E5	MW0
T	I	M	E	E5	TSF	MW1	L	A	Y
OSF	MMN	MMP	MW0	.	D	E	.	.	.
T	I	M	E	MW1	D	E	L	A	Y
1TF	MMN	MMP	OSF	.	TSF	MW0	L	.	.
T	I	M	E	.	D	E	.	.	.
OTF	MMN	MMP	.	.	.	.	.	.	.

CHANNEL 066

OSA	E7	E4	CN6	CP6	C6	CN5	CP5	C5	E3
CN3	CP3	C3	CN2	CP2	C2	K	.	E5	MW0
T	I	M	E	E5	TSF	MW1	L	A	Y
OSF	MMN	MMP	MW0	.	D	E	.	.	.
T	I	M	E	MW1	D	E	L	A	Y
1TF	MMN	MMP	OSF	.	TSF	MW0	L	.	.
T	I	M	E	.	D	E	.	A	Y
OTF	MMN	MMP	.	.	.	.	.	.	.

360

CHANNEL 070

OSA	E7	E4	CN6	CP6	C6	CN5	CP5	C5	E3
CN4	CP4	C4	K	.	D	C2	K	E5	MMO
T	I	M	E	E5	1SF	E	L	A	Y
OSF	MMN	MMP	MMO	.	1SF	MW1	.	.	.
T	I	M	E	MW1	D	E	L	A	Y
1TF	MMN	MMP	OSF	.	1SF	MMO	.	.	.
T	I	M	E	.	D	E	.	.	.
OTF	MMN	MMP	.	.	.	.	.	.	.

CHANNEL 072

OSA	E7	E4	CN6	CP6	C6	CN5	CP5	C5	E2
E1	CN4	CP4	C4	CN2	CP2	C2	K	E5	MMO
T	I	M	E	E5	D	E	L	A	Y
OSF	MMN	MMP	MMO	.	1SF	MW1	.	.	.
T	I	M	E	MW1	D	E	L	A	Y
1TF	MMN	MMP	OSF	.	1SF	MMO	.	.	.
T	I	M	E	.	D	E	L	A	Y
OTF	MMN	MMP	.	.	.	.	.	.	.

361 Logic for channel is on board 308, plug P2.

CHANNEL 074

OSA	E7	E4	CN6	CP6	C6	CN5	CP5	C5	E2
CN4	CP4	C3	CN3	CP3	C3	K	.	E5	MMO
T	I	M	E	E5	D	E	L	A	Y
OSF	MMN	MMP	MMO	.	1SF	MW1	.	.	.
T	I	M	E	MW1	D	E	L	A	Y
1TF	MMN	MMP	OSF	.	1SF	MMO	.	.	.
T	I	M	E	.	D	E	L	A	Y
OTF	MMN	MMP	.	.	.	.	.	.	.

CHANNEL 076

OSA	E4	K	C6	CN5	CP5	C5	E3	E1	CN4
E7	CN6	CP6	CP3	C3	CN2	CP2	C2	E5	MMO
CP4	C4	CN3	E5	D	D	E	L	A	Y
T	I	M	.	1SF	1SF	MW1	.	.	.
OSF	MMN	MMP	MW1	D	D	E	L	A	Y
T	I	M	.	1SF	1SF	MMO	.	.	.
1TF	MMN	MMP	.	D	D	E	L	A	Y
T	I	M	.	.	.	.	.	.	.
OTF	MMN	MMP	.	.	.	.	.	.	.

Tape stops
Marker number

362

Logic for channel is on board 308, plug P2.

CHANNEL 100
OSA E8
T I
OSF MMN
T I
TTF MMN
T I
OTF MMN

E4
M
MMP
M
MMP
M
MMP

CN7
E
MW0
E
OSF
E

CP7
E5
MW1

C7
D
TSF
D
TSF
D

E3
E
MW1
E
MW0
E

E1
L
L
L
L

K E5
A
A
A
A

MW0
Y
Y
Y
Y

CHANNEL 102
OSA E8
K T
OSF MMN
T I
TTF MMN
T I
OTF MMN

E4
M
MMP
M
MMP
M
MMP

CN7
E
MW0
E
OSF
E

CP7
E5
MW1

C7
D
TSF
D
TSF
D

E2
E
MW1
E
MW0
E

CN2
L
L
L
L

CP2 E5
A
A
A
A

C2 MW0
Y
Y
Y
Y

363

CHANNEL 104
OSA E8
C3 K
T I
OSF MMN
T I
TTF MMN
T I
OTF MMN

E4
M
MMP
M
MMP
M
MMP

CN7
E
MW0
E
OSF
E

CP7
E5
MW1

C7
D
TSF
D
TSF
D

E2
E
MW1
E
MW0
E

E1
L
L
L
L

CN3 E5
A
A
A
A

CP3 MW0
Y
Y
Y
Y

CHANNEL 106
OSA E8
CN2 CP2
T I
OSF MMN
T I
TTF MMN
T I
OTF MMN

E4
C2
MMP
M
MMP
M
MMP

CN7
K
E
MW0
E
OSF
E

CP7
E5
MW1

C7
D
TSF
D
TSF
D

E3
E
MW1
E
MW0
E

CN3
L
L
L
L

CP3 E5
A
A
A
A

C3 MW0
Y
Y
Y
Y

364 Logic for channel 1 is on board 309, plug P2.

CHANNEL 110
 OSA E8
 K T I
 OSF MMN
 T I
 1TF MMN
 T I
 OTF MMN

E4
 M
 MMP
 M
 MMP
 M
 MMP

CN7
 E
 MW0
 E
 OSF
 E

CP7
 E5
 MW1

C7
 D
 1SF
 D
 1SF
 D

E3
 E
 MW1
 E
 MW0
 E

CN4
 L
 L
 L

CP4 E5 A
 A
 A
 A

C4 MW0 Y
 Y
 Y
 Y

CHANNEL 112
 OSA E8
 C4 CN2
 T I
 OSF MMN

E4
 CP2
 M
 MMP

CN7
 C2
 E
 MW0

CP7
 K
 E5

C7
 D
 1SF

E2
 E
 MW1

E1
 L

CN4 E5 A
 A

CP4 MW0 Y
 Y

365 CHANNEL 114
 OSA E8
 CN3 CP3
 T I
 OSF MMN
 T I
 1TF MMN
 T I
 OTF MMN
 T I
 1TF MMN
 T I
 OTF MMN

E4
 C3
 M
 MMP
 M
 MMP
 M
 MMP
 M
 MMP

CN7
 K
 E
 MW0
 E
 OSF
 E

CP7
 E5
 MW1

C7
 D
 1SF
 D
 1SF
 D
 1SF
 D

E2
 E
 MW1
 E
 MW0
 E
 E
 MW0
 E

CN4
 L
 L
 L
 L
 L
 L

CP4 E5 A
 A
 A
 A
 A
 A

C4 MW0 Y
 Y
 Y
 Y
 Y
 Y

CHANNEL 116
 OSA E8
 CP4 C4
 T I
 OSF MMN
 T I
 1TF MMN
 T I
 OTF MMN

E4
 CN3
 M
 MMP
 M
 MMP
 M
 MMP

CN7
 CP3
 E
 MW0
 E
 OSF
 E

CP7
 C3
 E5
 MW1

C7
 CN2
 D
 1SF
 D
 1SF
 D

E3
 CP2
 E
 MW1
 E
 MW0
 E

E1
 C2
 L
 L
 L

K E5 A
 A
 A
 A

CN4 MW0 Y
 Y
 Y
 Y

366

OSA	CN7	CP7	C7	CN5	CP5	C5	F3	E1 E5	K MWO
• T	• I	• M	• E	•	• D	• E	•	• A	•
OSF	MMN	MMP	MWO	E5	TSF	MW1	L	•	Y
T	I	M	E	•	D	E	•	• A	•
1TF	MMN	MMP	OSF	MW1	TSF	MWO	•	•	•
T	I	M	E	•	D	E	L	• A	Y
OTF	MMN	MMP	•	•	•	•	•	•	•

	CN7	CP7	C7	CN5	CP5	C5	E2	CN2	CP2
OSA C2	K	.	E	.	D	E	.	A	MW0
T	I	M	MW0	E5	TSF	MW1	L	.	Y
OSF	MN	MMP	E	.	D	E	.	A	Y
T	I	M	OSF	MW1	TSF	MW0	L	.	Y
1TF	MN	MMP	E	.	D	E	.	A	Y
T	I	M	.	.	D	.	.	.	.
CTF	MN	MMP	.	.	.	.	.	.	.

Logic for channel 1 is on board 310, plug P5.

CP7	C7	CN5	CP5	C5	E2	E1	CN3
OSA							
CP3							
T	E		D	E	L	A	Y
OSF	MWQ	E5	1SF	MW1			
T	E		D	E	L	A	Y
1TF	OSF	MW1	1SF	MWQ	L	A	Y
T	E		D	E	L	A	Y
OTF							

CHANNEL 126		CP7	C7	CN5	CP5	C5	E3	CN3	CP3
OSA	CN7	CP7	C7	CN5	CP5	C5	E3	CN3	CP3
C3	CN2	CP2	C2	K				E5	MW0
T	I	M	E				L	A	Y
OSF	MMN	MMP	MW0	E5	TSF	MW1			
T	I	M	E		D	E	L	A	Y
1TF	MMN	MMP	OSF	MW1	TSF	MW0			
T	I	M	E		D	E	L	A	Y
OTF	MMN	MMP							

368

CHANNEL 130
OSA CN7
C4 K I
T MMN
OSF I
T MMN
TTF I
T MMN
OTF MMN

CP7 M
MMP
M
MMP
M
MMP
MMP

C7 E
MMO
E
OSF
E

CN5 E
E5
MM1

CP5 D
TSF
D
TSF
D

C5 E
MM1
E
MMO
E

E3 L
L
L
L

CN4 E5 A
A
A

CP4 MM0 Y
Y
Y

CHANNEL 132
OSA CN7
CP4 C4 I
T MMN
OSF I
T MMN
TTF I
T MMN
OTF MMN

CP7 CN2 M
MMP
M
MMP
M
MMP
MMP

C7 CP2 E
MMO
E
OSF
E

CN5 K
E5
MM1

CP5 D
TSF
D
TSF
D

C5 E
MM1
E
MMO
E

E2 L
L
L
L

E1 E5 A
A
A

CN4 MM0 Y
Y
Y

369

CHANNEL 134
OSA CN7
C4 CN3 I
T MMN
OSF I
T MMN
TTF I
T MMN
OTF MMN

CP7 CP3 M
MMP
M
MMP
M
MMP
MMP

C7 C3 E
MMO
E
OSF
E

CN5 K
E5
MM1

CP5 D
TSF
D
TSF
D

C5 E
MM1
E
MMO
E

E2 L
L
L
L

CN4 E5 A
A
A

CP4 MM0 Y
Y
Y

CHANNEL 136
OSA CN7
K C4 I
CP4 T MMN
OSF I
T MMN
TTF I
T MMN
OTF MMN

CP7 CN3 M
MMP
M
MMP
M
MMP
MMP

C7 CP3 E
MMO
E
OSF
E

CN5 C3
E5
MM1

CP5 CN2 D
TSF
D
TSF
D

C5 CP2 E
MM1
E
MMO
E

E3 C2 L
L
L

E1 E5 A
A
A

CN4 MM0 Y
Y
Y

Tape stops
Marker number

370

Logic for channel is on board 311, plug P6.

CHANNEL 300
OSA E6
E1 K I
T MMN
OSF I
T MMN
TTF I
T MMN
OTF MMN

E4
M
MMP
M
MMP
M
MMP

CN7
E
MMO
E
OSF
E

CP7
E5
MW1

C7
D
TSF
D
TSF
D

CFS
E
MW1
E
MMO
E

CPFS
L
L
L

CFSW
E5
A
A
A

E3
MMO
Y
Y
Y

CHANNEL 302
OSA E6
CN2 CP2 I
T MMN
OSF I
T MMN
TTF I
T MMN
OTF MMN

E4
C2 M
MMP
M
MMP
M
MMP

CN7
K E
MMO
E
OSF
E

CP7
E5
TSF

C7
D
TSF
D
MMO
D

CFS
E
MW1
E
E

CPFS
L
L
L

CFSW
E5
A
A
A

E2
MMO
Y
Y
Y

371

CHANNEL 304
OSA E6
E1 CN3 I
T MMN
OSF I
T MMN
TTF I
T MMN
OTF MMN

E4
CP3 M
MMP
M
MMP
M
MMP

CN7
C3 E
MMO
E
OSF
E

CP7
K E5
MW1

C7
D
TSF
D
TSF
D

CFS
E
MW1
E
MMO
E

CPFS
L
L
L

CFSW
E5
A
A
A

E2
MMO
Y
Y
Y

CHANNEL 306
OSA E6
CN3 CP3 I
T MMN
OSF I
T MMN
TTF I
T MMN
OTF MMN

E4
C3 M
MMP
M
MMP
M
MMP

CN7
CN2 E
MMO
E
OSF
E

CP7
CP2 E5
MW1

C7
C2 D
TSF
D
TSF
D

CFS
K E
MW1
E
MMO
E

CPFS
L
L
L

CFSW
E5
A
A
A

E3
MMO
Y
Y
Y

372

CHANNEL 310

OSA	E6	E4	CN7	CP7	C7	CFS	CPFS	CFSW	E3
CN4	CP4	C4	K	.	D	E	L	E5	MMO
T	I	M	E	E5	1SF	MM1	.	A	Y
OSF	MMN	MMP	MMO	.	D	E	L	.	Y
T	I	M	E	MM1	1SF	MMO	.	A	Y
1TF	MMN	MMP	OSF	.	D	E	L	.	Y
T	I	M	E	.	.	.	.	.	.
OTF	MMN	MMP	.	.	.	.	.	.	.

CHANNEL 312

OSA	E6	E4	CN7	CP7	C7	CFS	CPFS	CFSW	E2
E1	CN4	CP4	C4	CN2	CP2	C2	K	E5	MMO
T	I	M	E	E5	D	E	L	A	Y
OSF	MMN	MMP	MMO	.	1SF	MM1	.	.	Y
T	I	M	E	.	D	E	L	A	Y
1TF	MMN	MMP	OSF	MM1	1SF	MMO	.	A	Y
T	I	M	E	.	D	E	L	.	Y
OTF	MMN	MMP	.	.	.	.	.	.	.

373 Logic for channel is on board 312, plug P6.

CHANNEL 314

OSA	E6	E4	CN7	CP7	C7	CFS	CPFS	CFSW	E2
CN4	CP4	C4	CN3	CP3	C3	K	L	E5	MMO
T	I	M	E	E5	D	E	.	A	Y
OSF	MMN	MMP	MMO	.	1SF	MM1	.	.	Y
T	I	M	E	MM1	D	E	L	A	Y
1TF	MMN	MMP	OSF	.	1SF	MMO	.	.	Y
T	I	M	E	.	D	E	L	A	Y
OTF	MMN	MMP	.	.	.	.	.	.	.

CHANNEL 316

OSA	E6	K	C7	CFS	CPFS	CFSW	E3	E1	CN4
E4	CN7	CP7	CP3	C3	CN2	CP2	C2	E5	MMO
CP4	C4	CN3	E5	E5	D	E	L	A	Y
T	I	M	.	.	1SF	MM1	.	.	Y
OSF	MMN	MMP	MMO	.	D	E	L	A	Y
T	I	M	E	MM1	1SF	MMO	.	.	Y
1TF	MMN	MMP	OSF	.	D	E	L	A	Y
T	I	M	E	.	.	.	.	.	.
OTF	MMN	MMP	.	.	.	.	.	.	.

Tape stops Marker
number

374

CHANNEL 320
OSA E8
CPFS CFSW
T I
OSF MN
T I
TTF MN
T I
OTF MN

E4
E3 M
MMP
M
MMP
M
MMP

CN7
E1 E
MW0
E
OSF
E

CP7
K E5
MW1

C7
D
1SF
D
1SF
D

CN5
E
MW1
E
MW0
E

CP5
L
L
L

C5
E5 A
A
A

CFS
MW0
Y
Y
Y

CHANNEL 322

OSA E8
CPFS CFSW
T I
OSF MN
T I
TTF MN
T I
OTF MN

E4
E2 M
MMP
M
MMP
M
MMP

CN7
CN2 E
MW0
E
OSF
E

CP7
CP2 E5
MW1

C7
C2 D
1SF
D
1SF
D

CN5
K E
MW1
E
MW0
E

CP5
L
L
L

C5
E5 A
A
A

CFS
MW0
Y
Y
Y

375

CHANNEL 324
OSA E8
CPFS CFSW
T I
OSF MN
T I
TTF MN
T I
OTF MN

E4
E2 M
MMP
M
MMP
M
MMP

CN7
E1 E
MW0
E
OSF
E

CP7
CN3 E5
MW1

C7
CP3 D
1SF
D
1SF
D

CN5
C3 E
MW1
E
MW0
E

CP5
K L
L
L

C5
E5 A
A
A

CFS
MW0
Y
Y
Y

CHANNEL 326

OSA K
F8 E4
CFSW E3
T I
OSF MN
T I
TTF MN
T I
OTF MN

CN7
CN3 M
MMP
M
MMP
M
MMP

CP7
CP3 E
MW0
E
OSF
E

C7
C3 E5
MW1

CN5
CN2 D
1SF
D
1SF
D

CP5
CP2 E
MW1
E
MW0
E

C5
C2 L
L
L

CFS
E5 A
A
A

CPFS
MW0
Y
Y
Y

376

Logic for channel 1 is on board 313, plug P6.

CHANNEL 330

OSA	E8	CN7	CP7	C7	CN5	CP5	C5	CFS
CPFS	E3	CN4	CP4	C4	CP2	C2	E5	MMO
T	M	E	E5	D	E	L	A	Y
OSF	MMP	MMO	MM1	TSF	MM1	L	A	Y
T	M	E	MM1	D	E	L	A	Y
1TF	MMP	OSF	.	TSF	MMO	L	A	Y
T	M	E	.	D	E	.	.	.
OTF	MMP	.	.	.	.	.	.	.
	MMN	.	.	.	.	.	.	.

CHANNEL 332

OSA	E8	CN7	CP7	C7	CN5	CP5	C5	CFSW
E4	CN7	CP4	C4	CN2	CP2	C2	E5	MMO
E2	E1	E	E5	D	E	L	A	Y
T	I	MMO	MM1	TSF	MM1	L	A	Y
OSF	MMN	E	MM1	D	E	L	A	Y
T	I	OSF	.	TSF	MMO	L	A	Y
1TF	MMN	E	.	D	E	.	.	.
T	I	.	.	.	.	.	.	.
OTF	MMN	.	.	.	.	.	.	.

377

CHANNEL 334

OSA	K	CN7	CP7	C7	CN5	CP5	C5	CPFS
E8	E4	CN4	CP4	C4	CP2	C2	E5	MMO
E2	E2	M	E	E5	E	L	A	Y
T	I	MMP	MMO	MM1	MM1	L	A	Y
OSF	MMN	M	E	TSF	E	L	A	Y
T	I	MMP	OSF	D	MMO	L	A	Y
1TF	MMN	M	E	TSF	E	.	.	.
T	I	M	.	D	.	.	.	.
OTF	MMN	MMP	.	.	.	.	.	.

CHANNEL 336

OSA	E8	CN7	CP7	C7	CN5	CP5	C5	CN4
C7	CN5	C5	CFS	C3	CP2	C2	E1	MMO
CP4	C4	E	E5	D	E	L	A	Y
OSF	I	MMO	MM1	TSF	MM1	L	A	Y
T	MMN	E	MM1	D	E	L	A	Y
1TF	I	OSF	MM1	TSF	MMO	L	A	Y
T	MMN	E	.	D	E	.	.	.
OTF	MMN	MMP	.	.	.	.	.	.

Tape Marker stops number

DYNAMIC TESTS OF RECIRCULATING REGISTERS.

CH 378
Logic for terms for indexes 001-016 is on boards 313, 438, plug P1.
Logic for terms for indexes 017-036 is on boards 311, 435, plug P1.
Logic for terms for indexes 037-056 is on boards 310, 436, plug P1.
Logic for terms for indexes 057-076 is on boards 305, 435, plug P1.
Logic for terms for indexes 077-098 is on boards 306, 307, 437, plug P1.
Logic for terms for indexes 099-118 is on boards 308, 309, 439, plug P1.
Logic for terms for indexes 119-136 is on boards 312, 438, plug P1.
Logic for terms for indexes 137-160 is on boards 304, 436, plug P1.

OSA	A32	1SF	A32	1TF	A0	OSF	A32	OTF
A0	A32	1SF	A0	1TF	A0	OSF	A0	OTF
OSA	L32	1SF	L32	1TF	L0	OSF	L32	OTF
L0	L32	1SF	L0	1TF	L0	OSF	NP	OTF
OSA	NP	1SF	NP	1TF	N0	OSF	DP	OTF
N0	NP	1SF	NP	1TF	N0	OSF	DP	OTF
OSA	OP	1SF	OP	1TF	D0	OSF	OSF	OTF
00	DP	1SF	DP	1TF	D0	OSF	OSF	OTF
OSA	RP	1SF	RP	1TF	R0	OSF	OSF	OTF
OTF	RM	1SF	RM	1TF	Q0	OSF	OSF	OTF
OSA	QP	1SF	QP	1TF	IX	OSF	OSF	OTF
OTF	QM	1SF	QM	1TF	IX	OSF	OSF	OTF
OSA	I32	1SF	I32	1TF	X0	OSF	OSF	OTF
IX	I32	1SF	I32	1TF	X0	OSF	OSF	OTF
OSA	XP	1SF	XP	1TF	X0	OSF	OSF	OTF
X0	XP	1SF	XP	1TF	X0	OSF	OSF	OTF

End of tape E. Momentarily place the SDR TAPE ADVANCE switch in the ON position, advance the tape into the takeup canister and return it to the tape cartridge.

By Order of the Secretary of the Army:

Official:

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